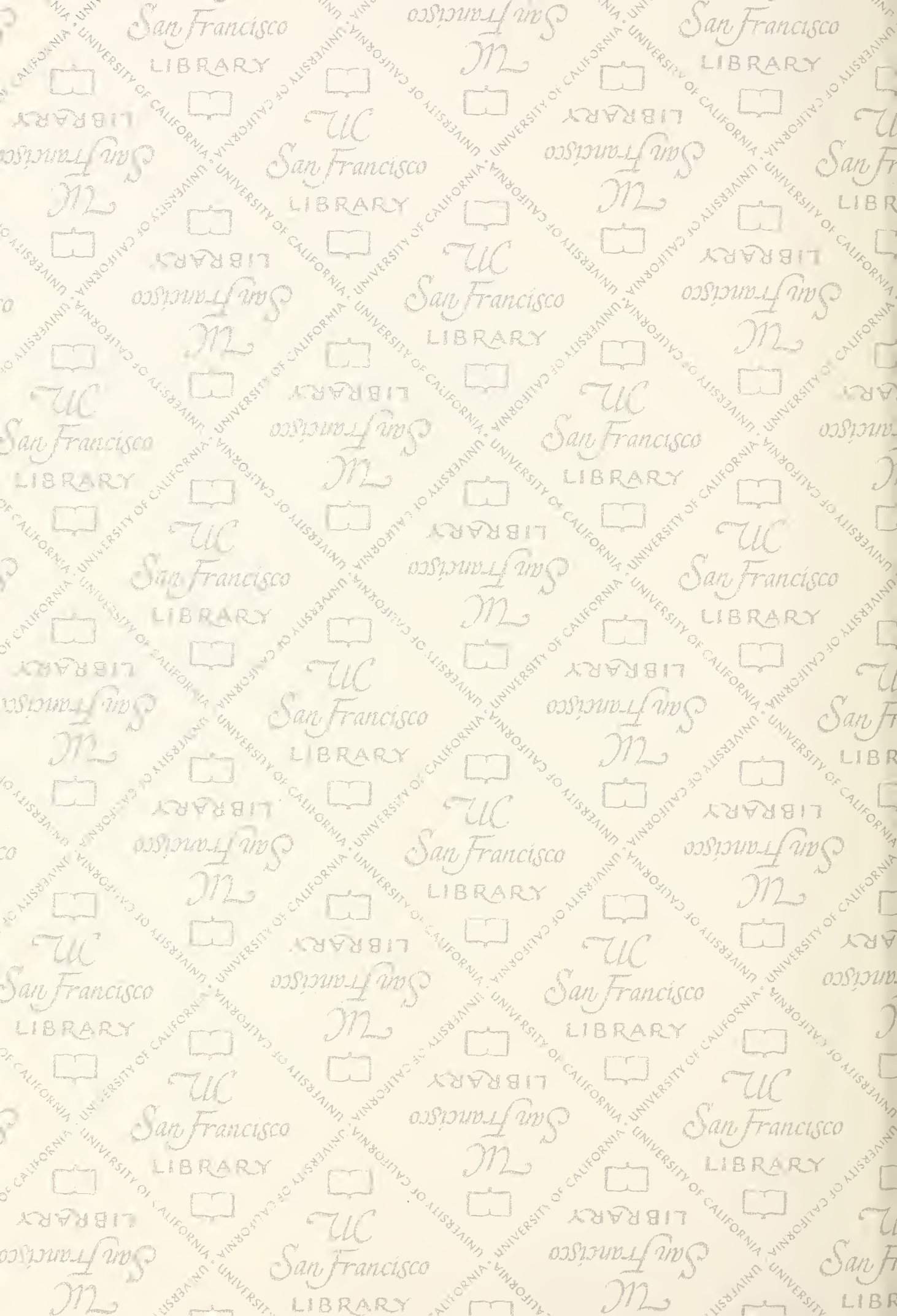



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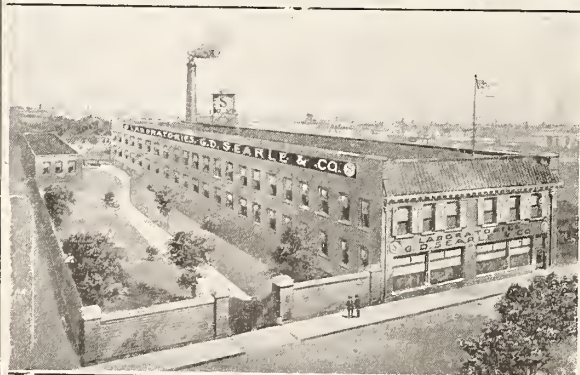


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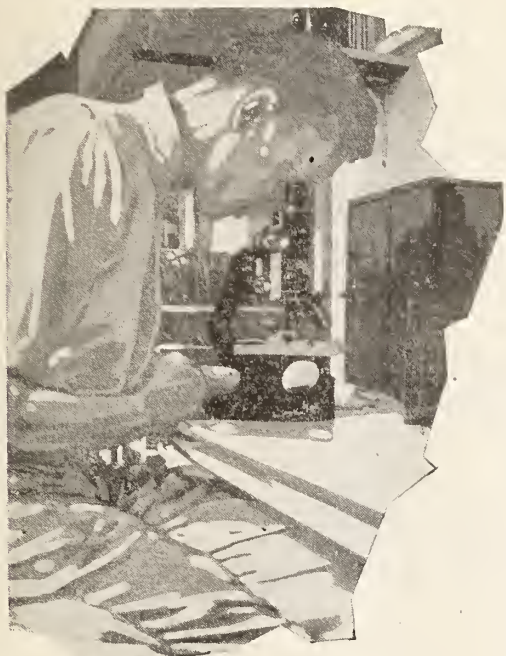


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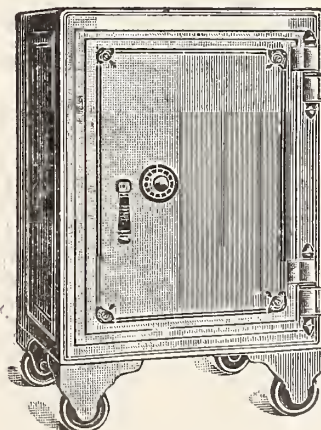
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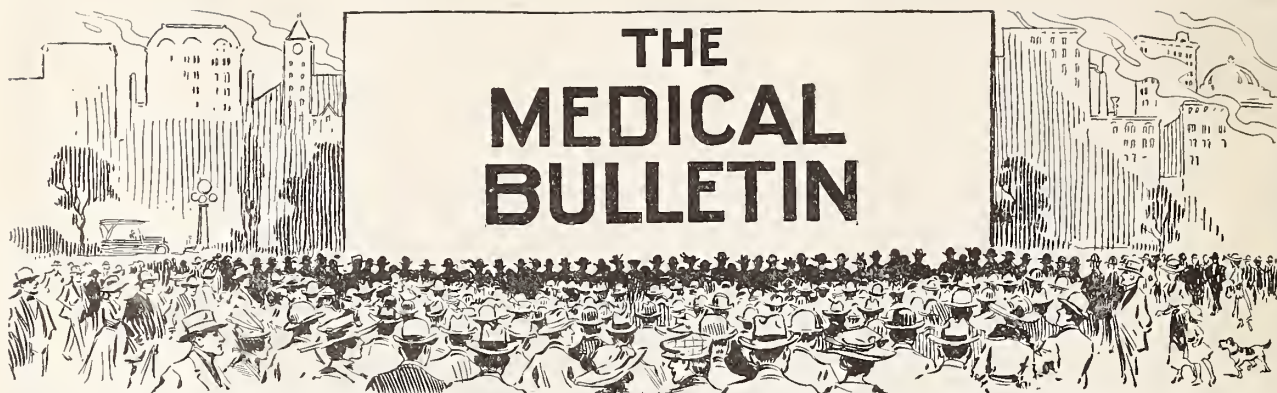
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Vol. XIX

GRAND RAPIDS, MICHIGAN, JANUARY, 1920

No. 1

Original Articles

THE TREATMENT OF INFECTED WOUNDS WITH DEMONSTRATION OF THE CARREL- DAKIN TECHNIC.

CYRUS B. GARDNER, Capt. M. C. U. S. A.

The present attitude towards and the treatment of an infected wound presents a striking and peculiar contrast to that which obtained a semidecade ago. In the pre-war days, the patients with suppurative processes were given scant attention, little or nothing being done to arrest the process. Nature was left to work out her own salvation and did so oftentimes with ugly deformities, troublesome scars and function destroying adhesions. The attitude towards those unfortunate victims was one of undisguised pessimism. Frequently the uninitiated and unskilled hospital orderly dressed their wounds and was otherwise charged with their care. Until the suppurative process was arrested, these patients were beneath the dignity of the skilled surgeon.

Now all this has changed. Today the victim of a suppurating wound is entitled to and receives the detailed care and attention so essential to his recovery.

Early in 1915 it was demonstrated and became an established fact that an infected wound could be made bacteria free. This is tantamount to saying that at last an antiseptic had been found which, while capable of inhibiting and destroying germ growth was not of itself harmful to the tissues.

That such an antiseptic existed was entirely at variance with the then modern and already traditional belief and practice.

Surgeons practiced, "aseptic" not "antiseptic" surgery and eagerly decried the announcement that any such potent bactericide had been discovered.

It was believed by a goodly number that such

an agent was beyond the realm of possibility and its advent should not be expected. In this connection, therefore, the new antiseptics, viz., the hyochlorite of soda and the chloramines met with the same sort of reception that had been accorded other discoveries in medicine.

This prejudice and opposition on the part of men of high standing in the profession is a lamentably sad commentary on the vaunted open-mindedness of the members of honored calling. However, this is in passing and at this date there is little or no opposition; the value of the method can no longer be denied. That poetic justice may be given suffice it to say that almost without exception, "those who came to scoff remained to pray." In fairness to American physicians, I hasten to add that the destructive criticism mentioned above does not apply with equal force.

A discussion, however, brief of the modern or Carrel-Dakin treatment of infected wounds divides itself naturally under four heads as follows:¹

1. Mechanical cleansing.
2. Chemical sterilization.
3. Bacteriological control.
4. Closure.

MECHANICAL CLEANSING.

1. *Debridement.*—The extent of the surgical procedure, which has for its object not only the mechanical cleansing but the preparation of the wound for the distributing tubes, will depend upon the time which has elapsed since the receipt of the injury. If seen before the onset of inflammation or in the so-called pre-inflammatory period this primary surgical interference should be most thorough.

Carrel and Dehelly say "there is no call for hesitation in making very free incisions because they can be brought together again after a few days. Extensive opening up of soft parts nearly always yields earlier closing." In the preparation of the surrounding skin, the use of iodine

¹ L. Rockefeller Institute notes.

is enjoined as its use greatly predisposes to later subsequent irritation from the hypochlorite solution. Vigorous mechanical cleansing with a free use of neutral sodium cleate and sterile water with alcohol or ether will suffice. Now is the time to remove foreign bodies, especially, shreds of clothing, detached fragments of bone, contused and badly damaged tissue, including skin edge and blood clots. Care should be exercised not to increase the amount of traumatism by a too brisk use of the gauze swab. The latter spreads, does not remove the infection. The already dead or badly devitalized tissue should be removed by a sharp cutting instrument. For this purpose nothing is better than a keen-edged razor. To remove minute shreds of clothing impregnating tissue, it is necessary to remove the tissue itself for all such tissue is sure to become necrosed. Bits of clothing carry the worst type of infection and sloughing tissue is the best possible culture media. The inference therefore is obvious.

In the mechanical cleansing of a compound fracture, certain special precautions are to be observed as follows:

A. Sufficiently long incisions to admit of a careful inspection of the seat of fracture;

B. Conservatism in the removal of bone and periosteum (up to the 23rd year the periosteum has osteogenetic powers). Splinters which are lying free are of course, removed but all splinters with adherent periosteum are to be preserved;

C. In longitudinal fractures the exposed marrow is removed;

D. Instillation tubes should be placed as closely as possible in contact with bone at seat of fracture.

Failure to observe the admonition against a too free removal of bone and periosteum will lead to unhappy functional results.

[A study of war wounds at the War Demonstration Hospital—Rockefeller Institute—and at U. S. A. General Hospital No. 35, West Baden, Ind., at which latter place the writer was in charge of Carrel-Dakin work, together with a perusal of recent literature forms the basis for the subject matter of this article.]

The drainage of most wounds which are to be subjected to the Carrel-Dakin instillation treatment is quite different from the method previously taught and practiced. It is not necessary to make counter openings at the dependent points.

Contact of the antiseptic being one of the essentials in the chemical sterilization of a wound it follows as a necessary corollary that all openings at dependent points for the purpose of drainage are contra indicated. One exception is empyema where dependent drainage is necessary that there may be no interference with lung expansion.

[The writer appreciates the healthy difference of opinion obtaining among physicians as to the better, or rather best, way of treating empyema. A moderate experience warrants the following conclusions:

1. In the face of poor drainage, the result of inadequate surgery, results will not be obtained from the instillation of Dakin's solution.

2. Costectomy at the most dependent point of the pleural cavity (and the way to determine the really dependent point is by insertion of the finger in the pleural cavity at the time of operation,) followed by instillation of Dakin's Solution will aid materially in reducing the morbidity and make the necessity for extensive secondary operations on the chest very rare. Complete healing usually results in 35 days.]

Adequate drainage will be provided by long incisions placed anteriorly, the openings being maintained by short heavy drainage tubes placed parallel to the incisions.

The incidence of the inflammatory period after the receipt of an injury is a varying one within narrow limits. Usually infection is well established during the 24-36 hour period. At this time the greatest circumspection must be practiced in the manipulation or surgical interference of an infected wound, whether of the soft parts or of bones. Radical surgical measures at the time of active inflammation is analogous to the surgical traumatism produced by searching out and removing the appendix during the 96 hour period and is only mentioned to be condemned. The use of a scalpel in a wound from which serum is exuding is an exceedingly dangerous procedure. It will be seen therefore that it is important to limit ones surgical activity to the barest necessity. Usually it is possible to insert the instillation tubes with very little manipulation and this must suffice. The only exception being muscle involvement when it is necessary to open the focus of infection as well as to remove easily reached hoemotomata. It is not well to seek for foreign bodies nor to attempt to remove splinters from the seat of fracture; incisions should be kept widely open and instillation tubes placed in every di-

verticulum. Finally the limb should be kept rigidly immobilized, not only to relieve pain but to prevent bacterial dissemination by muscle action. For this nothing suffices like the overhead apparatus. After the infection has been reduced by the chemical instillation complete surgical interference may be inaugurated. Then under anesthesia the necessary surgical procedure may be carried out, foreign bodies, sequestra and necrosed tissue being removed. Certain precautions are to be observed in operations in or thru cicatricial tissue for the reason that in a wound which has undergone complete cicatrization microbes remain latent for an indefinite period.² These secondary operation wounds which have undergone prolonged suppuration should not, therefore, be sutured. As will be indicated later the sutures may be put in place in certain instances, instillation continued and the complete closure made after the lapse of a few days. The use of instillation tubes is imperative to prevent lighting up old infections. An illustration of this is the all too frequent infection following bone graft. This may be obviated by the two stage operation. The extremities of the bones being first prepared, subjected to the antiseptic for a few days when, if sterilization remains complete, the graft may be placed and the closure of the soft parts effected. In this way only may unpleasant results be avoided. A study of a number of war wounds resulting in osteomyelitis warrants the following conclusions:

1. Successful suture generally impossible in operations made in or through wounds which have undergone prolonged suppuration.

2. Successful bone graft for non-union only to be expected if the two stage operation is performed.

3. The operation of sequestrectomy for bone which appears rarified (by X-ray) not to be insisted upon in the absence of suppuration.

In all operations made necessary by traumatism absolute hemostasis must be secured before the toilet of the wound can be considered complete. In injuries to the large blood vessels, ligatures must be placed both above and below the injured area. Silk or plain catgut should not be used as ligature material. As may be readily demonstrated both, especially the former, are quickly dissolved by Dakin's solution. Chromic catgut or linen only are to

be used. The principal objection to the latter being that which applies to all non-absorbable material.

2. CHEMICAL STERILIZATION APPARATUS.

The Carrel-Dakin technic implies the use of special but simple apparatus.

The Reservoir or Containers.—This is an amber colored, graduated (metric system) flask of 1000 cc. capacity for the purpose of holding the antiseptic. The upper end should be cup shaped to facilitate the introduction of the fluid and provision will be made for the inlet of air. It is held in position by a suitable standard (providing a range of from 50 to 120 cm. elevation) fastened to the bed. Care should be exercised in the manufacture of the containers that the glass is not so dark as to interfere with the reading of the height of fluid. It is important that the lower end have an opening of 7 mm. and so shaped that the conducting tube which also has an inner diameter of 7 mm. clasps it firmly.

The glass distributing tubes serve to make the connection between the conducting tube and the small rubber distributing tubes. The end joining the conducting tube being 7 mm. and the opposite end or opening 3-4 mm. internal diameter. The conducting tube should carry a spring pinch cock 10 cm. below the opening in the reservoir.

Small rubber distributing or instillation tubes. These should be of good quality with a wall thickness of 1 mm. and an internal diameter of 3-4 mm. There are four regular sizes Nos. 5, 10, 15 and 20 of the perforated non-covered type. The ends of these tubes are tied off with linen thread. The perforations which are .5 mm. in diameter are through and through 1 cm. apart and made on alternate sides of the tube. Nos. 5 and 10 are 30 cm. in length, Nos. 15 and 20 are 40 cm. in length. The number of the tube indicates the distance the perforations extend from the tied off end.

Covered tubes: These tubes are covered with Turkish (bath) toweling which should extend from the tied off end to a point 1 cm. beyond the last perforation. The size and numbering of these tubes correspond exactly to the plain or non-covered type. The perforations, however, are 1 mm. in diameter. A piece of linen thread with double ends may be tied to the toweling to be used as a guy rope to hold the tube in place.

2. If not previously recently immunized, the patient should receive a prophylactic dose of antitetanic serum.

Lateral opening tubes: 30 cm. in length; open end with a narrow slit 3 cm. from end.

Empyema tubes are 50 cm. in length with .5 mm. perforations for 10 cm. The tubes may be stiffened by the insertion of 22 gauge silver wire 30 cm. in length.

Loop Tubes: 70 cm. in length .5 mm. perforations extending 10 cm. in either direction from centre of tube.

THE DRESSING.

To protect his patient as well as himself, the surgeon will wear rubber gloves and a sterile gown. All dressing material will be handled with dressing forceps. The surgeon also will avoid conversation while facing or looking directly into the wound. The soiled dressings having been removed (by a nurse who will precede, especially in hospital ward work) the surgeon will clean the surrounding skin with pledges of gauze using neutral soap and water and lastly ether. He will then change dressing forceps and clean the wound and all its recesses, using gauze sponges, neutral sodium oleate and sterile water. With the spring dressing forceps all debris is removed from the wound which is dried by gently pressing a small piece of gauze over its surface. This procedure will suffice to take up the moisture left after cleaning. Under no circumstances are alcohol or ether to be used on the wound surface. Minute amounts remaining would destroy the hypochlorite solution instilled immediately after the dressing. A wound which is being successfully treated has no odor.

There are no hard and fast rules regarding the number and arrangement of tubes to be used in a wound. Suffice it is to say that the number and arrangement should be such as to insure an abundant and fresh supply of the hypochlorite at each 2 hour instillation period. Gauze should not intervene between the instillation tubes and the tissues to be treated. Generally in the irregular trench-like wounds the various sized perforated tubes are indicated. The puncture-like wounds on the anterior or superior surfaces may be successfully laked with lateral opening tubes.

Covered tubes should not be used in the presence of much wound secretion. Dakin's solution loses its identity and hence its usefulness in passing through a covered tube in the meshes of which pus is contained. The chief use of these tubes is on surface wounds where there is little secretion.

The tubes may be held in place by gauze sponges soaked in the hypochlorite solution. These gauze sponges serve the triple purpose of holding the tubes in place, taking up any excess of the antiseptic and absorbing the wound secretions. A string with double ends fastened to the tube and tied about the limb or made secure with adhesive strips is a measure which will insure security of a tube.

It is not necessary to change the instillation tubes at each dressing. Their patency, however, should be made certain by testing either by connection up with the reservoir or by means of a 20 cc. special urethral syringe.

PROTECTING THE SKIN.

Since the hypochlorite is more or less irritating to the normal skin the latter must be protected. This is done by placing about the margin strips of gauze—a convenient size is 8 x 16. cm.—impregnated with the following:

Vaseline	91%
Paraffin	6%
Resin	3%

This mixture is melted, poured over the gauze strips contained in a tin box and the whole sterilized in the autoclave—45 minutes at 15 pounds pressure.

The tubes in situ are then covered preferably, with a dressing of special design. It consists of four layers, gauze, absorbent cotton, a layer of non-absorbent cotton and finally the folded in cover of gauze. The absorbent side is placed over the wound. Wounds should be dressed every 24 hours. If the outer dressings are badly soaked, there are no reasons why they may not be changed at more frequent intervals without disturbing the instillation tubes.

There are various methods of supplying the wound with the antiseptic.

A. Intermittent.—The nurse in making the rounds simply presses the spring clamp for a few seconds releasing the necessary amount of liquid. This will vary in different wounds from a few cc. to as high as 150 cc.

B. Continuous instillation. Here it is necessary to interpose a screw pinch cock between the flask and the drop counter. This method cannot be recommended generally as it is suitable only for wounds requiring only one type of distributing tube.

C. Syringe. Injecting with a glass syringe the desired amount every 2 hours. This requires a separate syringe for each patient, is time consuming and generally unsatisfactory.

D. Automatic systems—both mechanical and electrical—have been devised to be used in connection with the intermittent method, not however, with satisfactory results. An intelligent and co-operating nurse corps to manipulate the first-mentioned intermittent method will be the one of choice.

3. BACTERIOLOGICAL CONTROL.

Neither the clinical aspect of the wound nor the general condition of the patient are a true guide to the bacteriological content of the former. For this reason it is necessary to study microscopically the bacterial flora of the wound secretions. There are two methods.

A. Culture. For the surgical clinician the culture method, which is infinitely more time consuming, possesses no advantage over the:

B. Smear method, which, while apparently crude gives important indications for treatment.

By means of a platinum or nichrome wire fused on a glass rod a particle of the wound secretion is spread thinly over a labeled slide showing the patient's name and if more than one, the number and location of the wound.

The instillation of the hypochlorite solution should be discontinued at least two hours before the smear is taken. Care should be taken to avoid wound debris and blood; otherwise the particle chosen from microscopical study should come from the worst part of the wound, especially necrosed tissue. The smear having been dried, should be fixed by passing "butterside" down three times thru the Bunsen burner flame and stained, preferably with carbolic thionin for two minutes.³ With an oil immersion and a No. 3 eye piece the count may be made at once. From five or six to thirty fields are counted. The fewer the bacteria the more fields to count. Each patient should have a chart a glance at which will suffice to inform the surgeon the exact bacteriological status of the wound. Smears should be taken every forty-eight hours. The bacteriological examination of fresh wounds is unsatisfactory firstly because the microbes are not disseminated and secondly because of the presence of blood.

Depending upon the size and circumstances of a wound from three to ten days are required to effect sterilization. Failure to do so should lead to a careful inquiry into the technic of the instillation. Having determined its faultlessness the continued presence

of infection points indubitably to the contamination of the wound by foreign matter, sequestra, necrosed tissue or a localized osteitis.

The advisability therefore of an exploration of the wound will have to be considered.

4. CLOSURE.

Carrel and Dehelly say that primary closure of a wound is a procedure not a method. Altho practiced in the beginning primary suturing of wounds was discontinued because of disastrous results, before the war had lasted many months. As stated above the bacteriological study of the secretion from a fresh wound is absolutely valueless in affording an indication for closing. It must be remembered, however, that injuries incident to industrial activities are much less contaminated and the general rule against primary closure cannot be applied so dogmatically. Much may safely be left to the discretion of the surgeon.

Wounds of the soft parts which have shown a satisfactory bacteriological count may be closed, providing there are no general or local clinical contra indications, at the end of five or six days, especially if the instillation of the antiseptic was begun within a few hours after the receipt of the injury.

In patients in whom infection manifested itself before the inauguration of the antiseptic treatment a longer time—eight to twelve days—should elapse before closing and the secretions should have been sterile for four to five days. In compound fractures which have once been the seat of active inflammation a still longer time is required, usually a month.

If the skin is freely movable and cicatrization has not commenced, adhesive strips may be used to bring the margins of the wound together. To avoid contamination of the wound surface by the adhesive strip, the latter may be sterilized over its middle portion by holding it over the flame of the alcohol lamp. A strip of sterilized paper or celluloid may intervene between the adhesive and the wound surface.

Secondary suturing requires a general anesthetic. Adherent skin must be relieved and the skin margins freshened. Good apposition may be obtained and undue tension avoided by a free dissection of either flap. The French surgeons insert a few strands of silk worm gut for drainage, especially if at the time of closing a bacteriological count of five or six per field still obtains. They never close, however, with this count without determining the absence of

3. Ten cc. saturated solution thionin in 50 per cent. alcohol added to 100 cc. of a 2 per cent. carbolic solution.

the streptococcus and the gas bacillus. In forty-eight hours, the silk worm gut is withdrawn, the secretions obtained with it studied bacteriologically and if there are any indications of impending infection the wound is opened up and again subjected to the influence of the anti-septic.

In wounds which have undergone prolonged suppuration a different procedure may be followed to advantage for the reason that it is never safe to put sutures thru cicatricial tissues without continuing the sterilization. This requires the so-called two stage operation as follows:

Firstly the wound is prepared by a dissection up the tissues and placing the sutures. The sterilization is continued for a few days, after which the wound is closed.

DAKIN SOLUTION AND THE CHLOROMINES.

Dakin's fluid is a solution of sodium hypochlorite (NaOCl) which contains not less than 0.45 per cent. or more than 0.5 per cent. sodium hypochlorite; it is alkaline to alcoholic phenolphthalein, but not to powdered phenolphthalein. A solution of sodium hypochlorite which fails to meet these specifications is no longer a "Dakin's solution."

Manufacture. There are three commonly employed methods. A. Electrolyses of a sodium chloride (brine) solution. This method is particularly valuable on hospital ships. By this means a highly efficient and suitable germicide may be prepared at a minimum cost. In five minutes (of electrolytic action on salt water) a hypochlorite solution of a concentration of 1-500 results and as the hypochlorites possesses potent germicidal action in high dilutions it is possible and advisable to dilute with ordinary sea water to make a 1-1000 or any desired concentration. A specially devised cell is necessary and as this method will scarcely be used by those for whom this pamphlet is intended no description will be given.

B. By the doubled decomposition of calcium hypochlorite and sodium carbonate. The following method devised by G. E. Cullen and J. H. Austin, and known as method "B"—war demonstration hospital modification—Rockerfeller Institute notes—is satisfactory in the absence of a chlorine tank.

METHOD "B"—WAR DEMONSTRATION HOSPITAL MODIFICATION.

To make about 40 liters, place in a 20 liter container the amount of bleaching powder indicated in the appended table in accordance

with the titration of the bleaching powder, and mix well with 5 liter of tap water. Shake vigorously and allow to stand for several hours.

Table for Approximately 40 Liters of Dakin's Solution.

Available Chlorine in Bleaching Powder Per Cent	Bleaching Powder in 5 Liters of Water Grams	Sodium Carbonate in 5 Liters of Water		
		Anhydrous Grams	Monohydrated Grams	Crystalline Grams
20-26	800	600	700	1600
28-34	600	420	490	1140
36-42	500	335	380	900

Dissolve the designated amounts of sodium carbonate in another 5 liters of tap water. (Pour the solution of sodium carbonate into the bottle containing the bleaching powder which has stood several hours, shake well, and allow the precipitated calcium carbonate to settle.) Test for complete precipitation of calcium by adding a few drops of barbonate solution to a few cc. of the clear supernatant liquid. After half an hour, siphon off the supernatant liquid through a double filter paper. This solution is a strongly alkaline hypochlorite solution of about quadruple strength, *which will keep for several weeks*. It must be neutralized and diluted for use as needed, in the following manner:

Titrate a measured sample (20 or 50 cc.) with 10 per cent. hydrochloric acid to absence of color with solid phenolphthalein. Add more powdered phenolphthalein to make sure the decolorization was due to neutralization rather than to bleaching; then calculate the amount of acid required for the volume "V" of filtrate it is desired to neutralize.

For Example; If 20 cc. of filtrate required 2 cc. of 10 per cent. hydrochloric acid, 100 cc. would require 10 cc., or 8 liters of filtrate would require 800 cc. of acid. This is to be added to the 8 liters slowly and with constant agitation.

To this solution add the same volume "V" of 6.25 per cent. solution of sodium bicarbonate, or the equivalent amount of sodium bicarbonate. (In the above example this would equal 8 liters of solution or 500 grams of sodium bicarbonate.)

Test a sample for alkalinity, as directed above, with both powdered and alcoholic phenolphthalein.

Titrate a 10 cc. sample with N/10 thiosulphate, as indicated above. Use 10 cc. of iodide solution and 5-6 cc. of acetic acid in titrating this concentrated hypochlorite solution.

Dilute the solution with tap water and verify the concentration by titrating a 10 cc. sample.

The calculation of this dilution is easily made thus:

1. Present Strength (or Titer)
Desired Strength (or Titer)
- X Present Volume Desired Volume: and
2. Desired Volume minus Present Volume
= Volume Water to add.

For example: If we desired a 0.48 per cent. hypochlorite solution, 10 cc. of which will require 13 cc. of N/10 thiosulphate, and we wished to dilute 3 liters of our concentrated solution, 10 cc. of which requires 32.4 cc. of thiosulphate for decolorization.

Then the present titer = 32.4

Desired titer = 13

Present Volume = 3000 cc.

Desired Volume = ?

Substituting $32.4/13 \times 3000 = 7480$ —Desired Volume.

7480 Minus 3000 = 4480 cc. water to be added.

Use of the accompanying outline insures correct order of procedure.

OUTLINE FOR METHOD "B"

1. Titrate bleaching powder.
2. Place weighed amount of bleaching powder in measured volume water.
3. Dissolve weighed amount sodium carbonate in measured volume water.
4. After several hours or over night mix carbonate and bleaching powder solution.
5. Test for complete precipitation of calcium.
6. Filter.
7. Neutralize a measured volume "V" to powdered phenolphthalein with dilute acid.
8. Add an equal volume "V" of 6.25 per cent. bicarbonate solution, or equivalent amount of the salt.
9. Test alkalinity.
10. Titrate and dilute to desired strength.
11. Verify final concentration.
12. Titrate again every 24 or 48 hours.

C. Preparation from chlorine and sodium carbonate. Because of its time saving the following method is recommended.

PREPARATION FROM CHLORINE AND SODIUM CARBONATE.

Chlorine may be obtained in liquid form in steel cylinders and is easily measured by a chlorine meter manufactured for the purpose. This is a stable, economical and convenient source of chlorine. A solution is prepared containing 15 grams of dry sodium carbonate per liter. (=17.6 grams monohydrate or 40 grams washing soda), a measured quantity, 4.8 grams per liter (or about 1700 cc.) of chlorine gas is allowed to run into the solution. Ten cc. of the solution is then titrated. If the solution is too

strong, it should be diluted to 0.5 per cent. NaOCl with 1.5 per cent. sodium carbonate, which serves to correct the unduly diminished alkalinity caused by the excess of chlorine introduced into the solution. However, the designated amount of carbonate is planned to give, at a concentration of 0.5 per cent. NaOCl, the minimum degree of alkalinity consistent with stability, and if chlorine has been introduced in such excess that the titer exceeds the desired by more than 6 or 8 cc. of N/10 thiosulphate, or if the solution fails to give a momentary flash of color with *alcoholic solution* of phenolphthalein, it should be discarded. The solution must, of course, show no color with powdered phenolphthalein. The solution should be titrated for hypochlorite concentration every 24 or 48 hours.

If a chlorine meter is not available, chlorine may be run into the 1.5 per cent. carbonate solution through any improvised diffuser. The amount of chlorine required to give a hypochlorite concentration of 0.5 per cent. is approximately twice the amount required to cause decolorization of powdered phenolphthalein. It is, therefore, convenient to add powdered phenolphthalein and note the amount of chlorine required to cause the decolorization. When almost twice that amount of chlorine has been introduced, frequent titrations of the hypochlorite content must be commenced.

TITRATION OF BLEACHING POWDER.

Bleaching powders vary considerably in their "available chlorine" content, so that it is desirable to determine the available chlorine in each lot. Exceptional samples may contain as high as 35 per cent. available chlorine. Bleaching powders with less than 20 per cent. available chlorine should be rejected.

The available chlorine content may be determined as follows: Exactly 10 grams of bleaching powder made up of small samples from different parts of the jar, in order to obtain a representative sample, are well shaken with a liter of water. After standing about six hours, the solution is filtered and a 10 cc. sample of the filtrate is titrated in exactly the same manner as in the titration of Dakin's solution. In this case the number of cc. of decinormal thiosulphate required to decolorize, multiplied by the factor 3.55, gives the percentage of active chlorine in the bleaching powder.

Every surgeon should be equipped to make certain simple tests to determine the concentration and the alkalinity of Dakin's.

Concentration.—The percentage of sodium hypochlorite is determined by titrating with tenth normal sodium thiosulphate (Hyposulphite) the amount of iodine liberated by a measured amount of Dakin's solution.

Measure 10 cc. of Dakin's solution, using a bulb pipette, into a beaker of Erlenmeyer Flash containing 50 cc. of tap water. (The addition of a few drops of starch solution facilitates determination of the end point).

Add 5 cc. of a 10 per cent. potassium (or sodium) iodide solution and 3 or 4 cc. of glacial acetic acid. Then run decinormal thiosulphate solution into the flask from a burette until the decolorization of the solution is just complete. The flask with the contents should be vigorously agitated during the titration.

The number of cubic centimeters decinormal thiosulphate required to decolorize the solution, multiplied by the factor 0.0372, gives the percentage of sodium hypochlorite. For example: 13.0 cc. \times 0.0372 = .48 per cent.

TESTS FOR ALKALINITY.

Test With Powdered Phenolphthalein.—A few crystals of powdered phenolphthalein are dropped on the surface of about 5 cc. of the solution to be tested and the solution vigorously shaken. Dakin's solution should remain entirely colorless. If there is any red color, the solution is too alkaline and must either be discarded or the excess alkalinity neutralized.

Test With Alcoholic Solution of Phenolphthalein.—About 0.5 cc. of alcoholic solution of phenolphthalein (1%) is *squirted* from a dropper into about 5 cc. of the solution to be tested, in a test tube. The solution should show a red color which will disappear at once. If there is not at least a momentary flash or red color the solution has so low an alkalinity that its hypochlorite content will rapidly diminish.

Preservation.—Dakin's solution should be kept in amber colored containers or in the dark.

Identity.—To avoid a mistake, it is best to color Dakin's solution with potassium permanganate—1 cc. of a 0.5 solution per liter. It is needless to say that this should not be added until the test for alkalinity is made.

Preparation of N/10 Sodium Thiosulphate.—This solution must be carefully prepared for upon its accuracy depends the accuracy of the titration of sodium hypochlorite. The sodium thiosulphate may be obtained in a pure form from any of the large chemical houses. 24.82 grams made up to one liter in a volumetric flask,

give a tenth normal solution; each cc. of which is equivalent to

.0127	gram Iodine
.003546	gram Chlorine
.00372	gram Sodium Hypochlorite
.0141	gram Chloramine-T
.006	gram Dichloramine-T

THE CHLORAMINES.

1. Chloramine-T. Chemically sodium toluene-sulphonchloramide—is a water soluble, stable (both in powder and solution) organic, odorless crystalline, white powder which contains 12.6 per cent. of chlorine. In striking contrast to Dakin's, solutions of Chloramine-T have little solvent action. A wound, the necrosed tissue of which has been removed by the solvent action of Dakin's, may be treated similarly and with equal success by the instillation of a 2 per cent. chloramine-T solution. This is sometimes an advantage as the latter produces little or no skin irritation and possesses high germicidal action.

A more dilute solution is useful in an irrigation in cystitis, inflamed conditions of the conjunctival sac and nasal passages. In the former conditions, a 1-1000 and the latter 1-200 solution will suffice.⁴

Gauze impregnated with the powder—5 per cent. by weight—has been found useful as a first aid dressing in industrial accidents. Incorporated (1%) in a sodium stearate cream it has been found useful especially in the treatment of burns and surface ulcerations. Since it liberates the chlorine content slowly it maintains effective sterilization over a prolonged period—twenty-four hours. It in no wise interferes with cicatrization. The paste should be removed daily, the wound being cleaned after the manner described for the Dakin solution dressing.

2. Dichloramine-T. Chemically toluene-sulphondichloramine is a yellowish white crystalline powder with a chlorine-like odor. It is not soluble in water, paraffine or petroleum. A product obtained by the chlorination of paraffin or petroleum. A product obtained by the chlorination of paraffin wax to which sodium bicarbonate is added (5% by weight) and known as chlorcosane is the best solvent for dichloramine-T. Since sunlight causes rapid deterioration, it should be kept in an amber colored bottle. It may be used in a 5-8 per cent. solution using chlorcosane as a solvent. It is

4. The reader is referred to "Dakin & Dunham Hand Book of antiseptics."

useful in the treatment of puncture like wounds in ambulant patients. A small quantity .5-3 cc. will suffice for ordinary moderate sized wounds, the dressing being changed daily.

Dichloramine-T dissolved as indicated has a very salutary effect upon wound granulations. We have found it particularly useful in osteomyelitic wounds (which have been cleaned and sterilized by Dakin's) to maintain sterilization and promote the growth of granulations until closure is complete.

Occupational wounds may be, as Lee of Philadelphia has shown, after the excision of dead tissue and palpably infected foci, bathed in the oil and the wound closed without drainage. This procedure however, is not a safe one unless the wounds are seen early—within 2 hours—and there is reason to believe that there has been but slight chance of virulent contamination. Should a portion of the wound show signs of infection, a stitch or two may be removed and the oil introduced to the foci of infection.

Dichloramine-T in a 2 per cent. solution is useful as a spray to the nasal passages especially in meningococcus carriers. To facilitate spraying, which should be done every two hours, it is usually necessary to reduce the viscosity of the chlorcosane by the addition of a tenth volume carbon tetrachloride.

Testing.—To estimate the concentration of the dichloramine solution: Dilute 10 cc. of dichloramine-T solution to 50 cc. with carbon tetrachloride. Measure 10 cc. of the solution into a flask and add 5 cc. of potassium sodide solution and 2 cc. of acetic acid. Titrate with N/10 thiosulphate. Multiply cc. required to decolorize by 0.3 to give per cent. dichloramine-T.

To estimate the concentration of the chloramine-T solution, proceed exactly as if testing Dakin's, multiplying cc. required to decolorize by 0.141 to give percentage of Chloramine-T.

Neutral Soap.—Tincture of green soap may be neutralized by the addition of dilute hydrochloric acid until it no longer shows presence of free alkali on the addition of alcoholic phenolphthalein. A pure soap, however, will give a red color with alcoholic phenolphthalein owing to the hydrolysis of the sodium salts of the fatty acids. This hydrolysis must be repressed in testing by the addition of an equal quantity of 95 per cent. alcohol.

A soap containing free alkali should not be used in or about wounds.

A CASE OF BILATERAL CAVERNOUS SINUS THROMBOSIS FROM A CARUNCLE ON THE NAPE OF THE NECK IN LATENT INFLUENZA.

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The cavernous sinus, lying between the meningeal and periosteal layers of the dura mater extends from the central end of the sphenoidal fissure in front, to the apex of the petrous bone behind. Its outer wall is the more distinct, and contains in it, but separated from the blood by the lining membrane of the sinus, the third and fourth nerves and the ophthalmic division of the fifth nerve, the nerves lying in the above mentioned order from above downwards and from within outwards.

The third nerve is situated higher up and, in the neighborhood of the cavernous sinus, further forward. It passes through a canal which is more resistant and which protects it better against external injuries.

Centrally, the internal carotid artery and the sixth nerve also pass through the sinus, being separated, likewise, from the blood by the endothelial lining. The inner wall is practically absent, the blood space communicating across the middle line with the opposite sinus in front, behind and below the pituitary body. This venous plexus, encircling the hypophysis, is the so-called circular sinus, or Ridley's sinus.

The cavernous sinus is transversed by numerous trabeculae, or fibrous bands, so that there is no central space but rather a number of endothelially lined, irregular, lacunar cavities communicating with each other—hence its name "cavernous," from its resemblance to cavernous tissue. Anteriorly, it receives the ophthalmic vein, with which it is practically continuous, and just above the third nerve the sinus *ala parvae* (which latter generally receives the fronto-sphenoidal veins of the diploe). Posteriorly the cavernous sinus ends in the superior and inferior petrosal sinuses. Through the Vesalian veins, the sinus communicates with the pterygoid plexus; through the venus plexus around the intraosseus portion of the internal carotid, with the internal jugular vein; and through small veins, which leave the cranium through the foramen ovale and foramen lacerum medium it communicates with the pterygoid and pharyngeal plexuses.

Frazier says:

"Of the most importance is the so-called vein of Trolard, which, arising in the pterygoid plexus of veins, passes through the foramen ovale and empties into the inferior petrosal sinus, with the third division of the fifth nerve. These means of communication explain the relation of cause and effect between inflammatory lesions in the distribution of the pterygoid plexus of veins (the aveoli of the inferior maxillary bone, the tonsils, and pharynx) and thrombosis of the cavernous sinus. By the way of the temporosphenoidal sinus the infectious agents from the skull may be carried to the cavernous sinus. Thus, also, inflammatory lesions in the distributions of the facial vein, by a retrograde process through the anastomatic terminal capillaries of the facial and ophthalmic veins, may give rise to sinus thrombosis."

The lateral sinus receives the veins from the occipital vein and the external parietal veins of the diploe, the superior petrosal sinus, the petro-squamous sinus, besides some of the veins from the cerebrum, cerebellum, medulla, and pons. It communicates with the occipital and vertebral veins through the mastoid and posterior condyloid foramina by means of the emissary veins.

The veins of the nape of the neck communicate freely with the spinal venous plexuses which through the occipital foramen join the jugular at the level of the sinus, or else the veins of the nape of the neck can communicate directly with the lateral sinuses through the occipital veins or the mastoid foramen which is at the level of the elbow of the sinus.

The inferior petrosal sinus connects the cavernous sinus with the commencement of the internal jugular vein. As it crosses the anterior compartment of the jugular foramen, it separates the glosso-pharyngeal nerve from the pneumogastric and spinal accessory nerves.

The transverse or basilar sinus is a venous plexus extending from the cavernous sinus to the margin of the foramen magnum. It communicates laterally with the inferior petrosal sinus, and inferiorly with the anterior spinal veins. Thru this sinus passes the sixth nerve. One of the larger channels forming the sinus passes transversely from one inferior petrosal sinus to the other. It is this portion to which the description of the transverse sinus given by some authors appears to apply.

A part of the lateral sinus running between the two layers of the tentorium cerebelli following the curve of the groove on the occipital and posterior angle or the parietal bone, is sometimes known as the transverse sinus. It later

ends, over the jugular process of the occipital bone in the sinus jugularis, or bulb of the internal jugular vein. The S shaped process of the lateral sinus lying on the mastoid portion of the temporal and the jugular portion of the occipital bone is known as the sigmoid sinus.

This study is based upon one case from our Clinic; one case reported by Bellin, Aloin and Vernet (18) in October, 1918; one case reported by Jack (1); the paper of Dwight and Germain (2) who reported four cases and studied the records of 178 previously reported; and twenty-eight others, reported in various journals, but not included in the above mentioned compilations.

Jackson (4) found in the twenty-eight cases that he collected that one was caused by ocular inflammation; one by injury to the orbit; four seemed to arise directly from general conditions (three from scarlet fever and one from marantic thrombosis); three from abscess of the forehead, cheek and lips; one from lachrymal abscess; one each in disease about the teeth and tonsils; and thirteen from the middle ear and mastoid.

He further states that Thompson thinks the most common cause is disease of the sphenoidal sinus.

Dwight and Germain record that fourteen of their 182 cases recovered.

Jackson in his series of twenty-eight cites four cases as surviving with total or partial loss of vision:

"In Seggel's case there was but little abnormal in the ophthalmoscopic findings, but the patient recovered with great limitation of the field pointing toward disease of the chiasm or optic tract. In the chronic non-fatal case reported by Zentmayer and Weisenberg, vision was materially reduced and there was some atrophy of the optic nerve, probably postneuritic. In Stocker's case where the patient survived four years, central vision was lost. At an early stage there was severe edema of the retina and disc, and later some atrophy and broad white stripes, with indistinct margins, in the retina. Day's patient recovered with the eye damaged by corneal ulceration. Werner's case recovered, and 'when last seen the eye was perfect.'"

Dr. Albert E. Halstead, a few years ago, discussed before the Chicago Ophthalmological Society two cases of cavernous sinus thrombosis which recovered. The origin of one was the sphenoidal sinus; the other was following an operation for traumatic pulsating exophthalmus, five weeks later.

The earliest and latest recorded cases of cavernous sinus thrombosis are similar in two respects—duration and extent. The earliest case is one of otitic origin, and is so devoid of classic symptoms that, had there been no autopsy, the diagnosis would never have been established. It was reported by Andrew Duncan, Jr., in the *Edinburgh Medical and Surgical Journal*, 1821. The disease ran a course of about six weeks, terminating fatally. For four weeks this patient suffered shooting pain in the left side of the head from 12 P. M. until daybreak. Later the pain was constant and dull. For a few days there was such intolerable pain over his eyes that he could not sleep. There is no record of chills or fever, or of symptoms of paresis from impingement on nerve fibers or circulatory interference. There was no clinical diagnosis made of the pathology of the cavernous sinuses which was revealed at autopsy. At the post mortem it was found that the purulent dissection had extended between the layers of the cervical muscles and far down the back beneath the trapezius muscle.

The latest recorded case is one from a carbuncle on the nape of the neck, reported by Bellin, Aloin and Vernet.

The patient was a soldier who had been debilitated by a long sojourn in the trenches, by the cold and poor hygienic conditions. He had been cared for for twenty days in provisional quarters for an affection of a general order, not defined; then tetany appeared and its convulsive crises led to a diagnosis of tetanus, at the time he entered the hospital.

He was semi-comatose. His temperature was 102.2. He complained of headache and great thirst. There was internal strabismus on the left with facial paralysis and partial paralysis of the third and fifth nerves. There was slight ptosis and an almost imperceptible puffiness of the left eyelid. A circumscribed edema about the left sterno-mastoid muscle was found, with contracture of the muscle, and the head tilted to the left. When shaved for the operation, a caput medusa was found on the left. The diagnosis of a lesion, probably a thrombophlebitis, localized near the styloid process, in the neighborhood of the cavernous sinus, was made and confirmed by operation on the lateral sinus of the left side. No pus was found at this time but a well formed thrombosis was present extending both ways in the lateral sinus. The condition of shock prevented complete

evacuation of the clot and the patient died a few hours after the operation from septicemia.

In autopsy the sterno-mastoid wound was opened. The jugular vein was thrombosed to the thyro-lingual-facial trunk where it had been ligated. From the prestyloid space the pus flowed out through all the muscular interstices. The pterygoid muscles seemed full of small abscesses. Pus covered the lateral wall of the pharynx and was found as far as the vertebral bodies and had dissected the muscles of the neck on the left side, creating channels which communicated with the cavity of the carbuncle. The parotid gland was filled with honeycombed abscesses which compressed the facial nerve. There was a clot in the torcular Herophili and the entire length of the longitudinal sinus was filled with a thrombosis. The superior and inferior petrosal were filled with a purulent matter and the cavernous sinus was an actual sponge of pus. The external motor oculi, patheticus and trigeminal nerves were bathed in pus. The facial and auditory nerves farther down seemed unaffected. The ophthalmic veins were thrombosed on both sides and pus flowed out from all the tissues of the orbit. The right basal meninges were unaffected but on the left purulent tracts were scattered about. There were two small abscesses in the cerebrum which probably gave rise to the tentaniform contractions noted on the patient's entrance to the hospital.

The cases of infectious cavernous sinus thrombosis as noted are rare and relatively few have been reported. The case reported in this paper differs from the majority of those recorded, in a few particulars:

1. The infection originated from a carbuncle on the nape of the neck.
2. There was no initial chill or subsequent chills although the infection was due to the streptococcus and produced a temperature above 103 degrees for several days, eventually reaching 107 degrees by axilla.
3. The pupils remained normal in size and responsive to light up to the time of the last observation on the evening before death, although the involvement of the third nerve which led to ptosis and ophthalmoplegia externa would also have been expected to lead to paralysis of the sphincter irides, and dilatation of the pupil.
4. There was early immobility of both eyes without a preceding squint, due to the simul-

taneous involvement of all the external ocular nerves in the thrombosed cavernous sinuses.

CASE REPORT.

On December 19, 1918, R. McD. first came under our observation. The clinical history was as follows:

Mr. R. McD., twenty years of age, was a student at Lansing in the Student's Army Training Corps. He had had no illness except the Spanish Influenza during the latter part of October, 1918. His convalescence was prolonged and he was easily fatigued when his last illness began with the appearance of a boil on the back of his neck early in December. Later, about December 12th, what he considered another "boil" started and was accompanied by great stiffness in the neck and shoulders, and much pain.

On Friday, December 13th, he could eat nothing because he felt so ill. He presented himself at the S. A. T. C. Infirmary, complaining of the pain and stiffness in the back of the neck and the loss of appetite. The orderly of whom he asked entrance told him that he had only a pimple on the back of the neck, which required no medical attention and he was not seen by the medical officer.

On December 15th and 16th, two of his friends told him that if he could not eat he must go to the Infirmary, and each, in turn, went with him. On the 16th, at the third visit, he was seen by the medical officer, who told him that he had a boil on the back of his neck, that he would be going home soon and would be all right. He ordered an antiphlogistic dressing. On Tuesday afternoon, December 17th, he received his discharge from the S. A. T. C., and returned to the temporary home of his mother in Battle Creek. On his arrival that night he could not identify his own baggage nor remember who took him to the train. He had not eaten any food for four days. His neck and shoulders were stiff, and the entire integument of the back of the neck, from ear to ear, and extending almost to the vertex, was indurated and of a bluish red color. The mother said that his temperature on arrival home was high, but she did not know how high. He began vomiting December 18th. His mother gave him enemas and a bath and kept him in bed. He slept none that night. On December 19th, a surgeon was called who incised the back of the neck and introduced drainage. Very little pus was evacuated. The patient complained of pain in his eyes for the first time, and an aching "thud" in the eyes, beginning when pressure was made on the neck at the time of the incision. About three hours later as I was passing their apartment in the evening, the mother, with whom I had been acquainted as a neighbor, asked me to step in to see her son, saying that his eyes looked so "queer." She stated that she had called for their family physician who had not yet been reached. At first glance at the slightly protruberant eyeballs and chemosis of both conjunctivae, I looked for the initial lesion and found it in the freshly opened carbuncle on the back of the neck. At this time the chemosis on the right eye was greater than on the left; the carbuncle was slight-

ly at the right of the median line on the back of the neck, and the right mastoid was "doughy" and red. At this time the patient complained only of nausea and headache and pain in the eyes—an aching thud. There was no ptosis of the lids. He could move his eyeballs in all directions. His eyeballs seemed simply big from beginning conjunctival chemosis and slight swelling of the lids. That evening on the advice of Dr. W. F. Martin, the family physician, the patient was removed to the hospital. Dr. Martin called us the next morning asking that the patient have an early examination of his eyes as something had developed in the night that had made him blind. About 9 A. M., Friday, December 20th, examination revealed the following symptoms:

1. Patient's temperature was 103.2 degrees; pulse 92; respiration 28; bowels constipated. He lay on his back with his head slightly inclined to the right.

2. He answered questions audibly but weakly, then would lapse into delirious whisperings.

3. There was bilateral exophthalmos, the left as great as the right, with exquisite tenderness over the eyeballs.

4. There was ptosis of the greatly swollen eyelids, with

5. Extreme chemosis of the conjunctivae, both projecting onto the cheeks through the closed lids.

6. The anterior portion of the globe seemed normal aside from the chemosis of the conjunctivae.

7. The eyelashes and conjunctivae had been glued together during the night with bloody serum, making the vision seem poor when the lids were first lifted.

8. There was anesthesia of the cornea, as evidenced by his bearing without flinching, the wiping away of the serum to examine the fundi.

9. The pupils were equal and normal in size and actively responsive to light. The convergence reflex could not be obtained as

10. There was ophthalmoplegia externa.

11. Central color vision was accurate. The fields were only grossly measured but seemed quite normal in size. The form also was good.

12. There was binocular single vision. Patient said that he had not seen double at any time.

14. Fundi: With pupils dilated with homatropine and cocaine, the media were found clear beyond the conjunctivae. The borders of the papillae were comparatively clear cut. There was very slight blurring of the upper and inner borders. The arteries were small and the veins tortuous. No retinal lesions were seen. The macular, foveal and juvenile reflexes were brilliant. It was impossible to get a perfect view of the periphery because of the complete ptosis of the greatly swollen eyelids which had to be held up, the fixed eyeballs, the dripping conjunctivae and the pain which the manipulations caused. The pupils were contracted with eserine after the examination.

Dr. W. H. Riley, who was also called in consultation, examined the heart and reflexes at this time. He found pericarditis and myocarditis but no signs or symptoms of meningitis.

The evening of this same day while in conversation with Dr. E. P. Wilbur of Kalamazoo, who was called in consultation, I stated that in my opinion this was a case of sinus thrombosis with paresis of all the nerves of the cavernous sinus instead of an orbital cellulitis, for the condition was bilateral and there was no pointing of the tissues on either side, which almost precluded orbital cellulitis. Dr. Wilbur concurred and advised antistreptococcic serum. When he saw the patient thirty-six hours before death, the pupils responded to light and the intraocular tension was normal. The patient had not seemed conscious for four hours before this. Dr. M. A. Farnsworth in consultation reported negative findings in the ears and nose. Dr. W. O. Upson reported the X-ray findings as follows:

"The bones of the cranium are normal and there is no X-ray evidence of increased intracranial pressure. The sella turcica is normal.

The maxillary, frontal and sphenoidal sinuses are negative and there is no X-ray evidence of an inflammatory process. There is a slight amount of cloudiness in the right ethmoidal sinus that would suggest thickened membrane. The left ethmoidal sinus is normal."

On Saturday, the 9th day of his sickness he began expectorating bloody mucus. His temperature was 103 degrees by axilla, pulse 100, respiration 28. He seemed unconscious all the time, but moaned a great deal. There was involuntary micturition. The pupils were still active to light. Homatropine and cocaine were again instilled and the fundi examined twice again, the last time being at 8 P. M., ten hours before his death. At this last examination the conjunctivae were more wrinkled and thickened. The bloody serum teared over his cheeks. The nerve heads had become edematous at the upper, nasal and lower border, but a segment on the temporal border remained clear cut. The retinae were pale, and above the nerve on the right there was a billowy whiteness resembling the infiltration seen in commotio retinae. The arteries were small, veins full and tortuous. No hemorrhages were seen. The frontal veins were thrombosed and made a purplish streak down the middle of the forehead, that grew darker. The patient understood that he was being talked to, for he essayed to answer questions. He whispered the answers so faintly that they could not always be understood. During the day he was restless, kept moving his arms and legs about, and slept in short naps, snoring when he slept. He breathed through his mouth for his nose was swollen. He drank malted milk and fruit juices during the early part of the evening, and at 9:15 P. M., he asked for water. At this time his temperature was 104.8 degrees, pulse 145 and respiration 42. His arms and legs were stiff.

At midnight the patient mumbled and sang but could not swallow.

A little later he groaned with every breath. The eyes became more protruberant and of a purplish color, the pulse was very rapid and weak. It could not be counted. At four o'clock the axillary temperature was 106 degrees; at 6:30 it was 107. He died at this time with froth oozing from his mouth.

Post Mortem.—Permission was granted for a postmortem examination of the chest and abdomen. This was done by Dr. C. E. Roderick at the request of Dr. W. F. Martin.

Dr. A. S. Warthin, who studied microscopic sections of the heart, lung, and liver reported:

"In the liver a streptococcus pyaemia and septicemia. In the heart and lungs multiple abscesses containing great numbers of streptococcus colonies. There are large areas of metastatic pneumonia in the lungs with streptococcus colonies everywhere, and the liver shows cloudy swelling with streptococcus in the blood. In addition, on the mitral valve there is a very early endocarditis, also streptococcic in origin. This patient therefore had a most intense streptococemia. Pyaemic abscesses of the heart are not very common and when they do occur, it is usually an expression of intense bacteremia."

The pathogenesis of the sinus thrombosis was quite unlikely to have been by contiguity, but must have been the formation of a thrombus of a vein at the site of the carbuncle.

The veins of the nape of the neck communicate freely with the spinal venous plexus, which, through the occipital foramen join the jugular at the level of the sinus; these veins, also communicate directly with the lateral sinus through the occipital veins, or through the mastoid foramen, which is at the level of the elbow of the lateral sinus. From the sigmoid the direct route to the cavernous sinus is through the superior petrosal.

It may be that the thrombosis reached first the jugular sinus to travel in two opposite directions; on one side towards the cavernous sinus through the inferior petrosal sinus; and on the other side, through the jugular vein. Of these tracts it would be impossible to state precisely which one was followed by the infection. After reaching the cavernous sinus it progressed through the ophthalmic veins to the angular and its tributaries, and through the Vesalian vein to the pterygoid plexus and its tributaries.

There must have been numberless small necrotic thrombi entering the circulation which being washed through the lungs and scattered to the different organs as emboli there set up metastases. Thus through both venous and arterial systems this virulent, infiltrating streptococcic infection inundated the whole circulatory system presenting the local symptoms narrated and the general ones of headache, nausea, vomiting, constipation and a fever which took on the classic march absolutely significant of all septiciemias.

ETIOLOGY OF INFECTIOUS CAVERNOUS SINUS THROMBOSIS.

1. It is more common in young adults; while rare in the extremes of life.
2. It is oftener found in brachiocephalitics. (Korner).
3. The structure of the sinuses is said to favor venous stasis. (Marfan).

4. The triangular shape of the canals increases the functional resistance, the walls constructed of fibrous tissues are rigid, and the dense bands of fibrous tissue which pass from one wall to the other prevent the collapse of the sinus and themselves offer resistance to the blood currents.

5. Sinus phlebitis occurs more frequently on the right side than on the left. The right sigmoid is generally broader and deeper; it also extends further out and forward than that of the opposite side. (Von Bergman).

6. Horizontal decubitus predisposes to venous stasis.

7. Some of the veins opening into the lateral sinus pour in their blood in a direction opposite to the current in the sinuses, so impeding the flow in both veins and sinus.

8. It may follow injury to the head, such as fractures of the skull; blows upon the head; punctured wounds through the orbit.

9. It may be caused by a direct injury to the sinus. The cavernous sinus is the only one which can be directly injured without involving the skull. This is rare. There are four such cases collected by Dwight and Germaine.

10. It is usually the result of a septic process.

This septic process may be brought about by contiguity, though rarely, as in meningitis, diseases of the bone, abscess in the post orbital space.

Or it may occur by extension of the process through the tributary veins. The common origin of primary thrombosis of the cavernous sinus is usually through the ophthalmic vein, whose branches, the frontal, supra-orbital and angular, drain the face and scalp; or from the mouth, nose and pharynx, through the pterygoid plexus. Or, again, the thrombosis may follow the sheathes of the nerves causing meningitis.

The cavernous sinus may become thrombosed from other sinuses.

The thrombosis may follow influenza with its resultant empyema of the sphenoidal and ethmoidal cells and caries of the bones. (Laveran, after the epidemic of 1889-90 said: "Phlebitis has been a very frequent complication of grippe.")

It may have as its source a frontal sinusitis. A case is reported of five weeks' duration. Six days before death an intense pain was localized above the right orbit. Patient felt something

"snap" within the right orbit and the pain diminished, but immediately the right eyelid began to swell.

The septic process may start in the nasal cavities from furunculosis, trauma, tuberculosis, syphilis, and polypi. Verhoeff of Boston reported a case starting from a small furuncle in the nose. The infection extended up on the outside of the nose along the subcutaneous tissue into the orbit. The patient died in three or four days.

It has been known to start in the buccal cavities from such causes as ulceration of the tonsils or pharynx, including phlebitis of the veins of the pterygoid plexus.

Cases have been reported where cavernous sinus thrombosis was the results of an infection in the skin, in one instance caused by a pimple in the skin of the temple, which the patient had pinched with the fingers a few days before; in another caused by a carbuncle on the neck.

One was a case due to erysipelas of the face, caused by a bite on the eyelid by a friend. It occasioned phlebitis of the anterior facial and ophthalmic veins.

Thrombosis may occur from osteitis and periosteitis. The case is reported of a little boy with persistent suppurative periosteitis of the jaw. He had a lower molar extracted. Immediately afterward the lids began to swell, the globes protruded, rigors occurred, and the temperature rose to 104 degrees, the pulse failed, consciousness was lost and death ensued.

Infectious inflammation in either maxilla may set up phlebitis in the coronary, facial and other veins. Dento-alveolo-periosteitis or any condition causing an abscess of the pterygo-maxillary fossa may give rise to cavernous sinus thrombosis.

SYMPTOMATOLOGY.

1. Occlusion of the lateral sinus blocking the inlet of the mastoid vein gives rise to painful circumscribed edema over the mastoid.

2. Pain upon percussion of the mastoid is present when the bone or periosteum are inflamed.

3. If the lower part of the lateral sinus is thrombosed so that the condylar veins are shut off (through which the superficial circulation of the lateral lower occipital region drains) a brawny hardness and edema may be made out in the upper part of the posterior cervical triangle. Zaufal discovered the sign of a unilateral dilatation of the mastoid vein to the size of the jugular on the same side.

4. With internal jugular involvement there is extreme local tenderness over the upper portion of this vessel on palpation, or extreme tenderness may be experienced in swallowing.

5. When thrombosis follows down into the jugular, this vein may be easily palpated as a firm, cord-like structure. Disintegration of the thrombosis may cause it to disappear in a few days.

6. Gerhardt has pointed out that during inspiration the external jugular vein on the affected side is less prominent. This is due to the occlusion of the internal jugular, which allows rapid drainage of the external branch into the common trunk.

7. If the thrombosis extends into the common trunk, the external vessel is then exorged, and more prominent than on the sound side.

8. The lymphatic glands of the neck are frequently engorged and easily palpable.

9. The head is usually inclined to the affected side to lessen muscular pressure on the jugular.

10. If the inflammatory thickening at the jugular foramen is sufficiently great, it involves, by extension or pressure, the cranial nerve trunks which make their exit at this opening. Pneumogastric, spinal accessory and glossopharyngeal symptoms are produced. Respiratory, laryngeal, cardiac and vocal disturbances; difficulty in swallowing and spasm or paresis in the sternomastoid and trapezius point to this condition.

11. Almost from the first there are distinct cerebral symptoms. The cephalalgia is attended by somnolence which may deepen into coma. Delirium is often an early symptom.

12. The general manifestations are those of pyaemia. The local manifestations are the result of disturbed circulation. The presence of a swollen sinus, or an extra-sinus exudate will account for many of the symptoms of thrombosis. Within the skull there is disturbance of the brain function; outside the skull, edema, local edema of the eyelids and retrobulbar edema with exophthalmus caused by stasis in the ophthalmic vein. Neuralgia of the first division of the trigeminal and paralysis of the abducens, trochlear and oculomotor nerve. Disease of the oculomotor nerve is also manifested by ptosis. The pupil is usually contracted at the beginning of the disease. If pressure on the nerve is increased, the pupil becomes dilated and fixed corresponding with oculomotor paralysis, strabismus or some other abnormal position of

the eyes and total ophthalmoplegia with amaurosis later as a result of pressure on the optic nerve.

Von Bergman asks:

"Are these manifestations of stasis in the eye and paralysis of all the muscles of the eye characteristic of thrombosis of the cavernous sinus? Hessler finds that most of the symptoms may be present in pure, uncomplicated, thrombo-phlebitis of the transverse sinus, but that they are found more frequently and combined with each other in progressive sinus phlebitis. The only additional symptom in thrombo-phlebitis of the cavernous sinus besides those of the transverse is swelling of the eyelids produced by direct stasis of the ophthalmic veins." (Bull).

13. Headache is diffused or limited.

14. Dizziness, nausea and vomiting.

15. Rapidly increasing body temperature which shows marked remissions. In a few hours the temperature rises to 104 and 106 degrees, and almost immediately this is followed by a fall, somewhat to subnormal, usually with profuse perspiration. In rare cases the fever is continuous and not remittent. Repeated chills are an important sign because a characteristic sign of pyaemia. Either the first chill occurs at the same time as the first symptom of cerebral irritation or is one, two, or more days later. The pulse is subject to the same variation as the temperature (100-140).

16. Metastatic abscess formation causes slighter remissions of pulse and temperature.

17. The tongue is coated and dry.

18. There is a tendency to diarrhea in chronic cases. In other cases constipation.

19. Jaundice occurs in pure sinus phlebitis three times as frequently as in the complicated form. The liver and spleen are enlarged. At times there is an exanthem with diarrhea and pea-soup stools.

20. Convulsions rarely occur in pure sinus phlebitis. In the complicated form they occur three times as frequently and most frequently when complicated by cerebral abscess.

21. The activity of the brain is unimpaired in uncomplicated, infectious thrombosis.

22. Irritating cough and sudden painful sensation in the chest announce the obstruction of small pulmonary vessels.

23. Pneumothorax may be the result. Hessler has shown by statistics that in 130 cases of sinus phlebitis with metastases, the lungs were found unaffected only 14 times.

24. Metastases have been observed in the joints, synovial sacs, muscles, kidneys, spleen,

liver, eye and in one case in the aryepiglottic fold caused by small emboli which passed wide pulmonary capillaries and were deposited as emboli.

25. Hoarseness, dyspnea, slowing of the pulse, and even death through respiratory paralysis are manifestations of compression and inflammation of the vagus nerve.

26. Spasms in the sternocleidomastoid and trapezius muscle are produced by irritation of the spinal accessory.

27. Dysphagia occurs in disease of the glossopharyngeal and hypoglossal nerves. The latter emerge through the anterior condyloid foramen.

28. Choked disc occurs according to Hansen in 30 to 50 per cent. of all cases of pure phlebitis of the transverse sinus. Therefore it is difficult to differentiate thrombophlebitis of the transverse sinus from thrombophlebitis of the cavernous sinus.

The classic symptoms of primary cavernous sinus thrombosis are.

1. Exophthalmos, appearing suddenly, and progressively increasing, usually bilateral. Of the 134 cases coming to autopsy of Dwight and Germain, only thirty-one showed a thrombosis limited to one side. In sixty-five, both sides were affected, and in twenty-eight, other sinuses were also involved.

2. Swelling in the orbit.

3. Swelling of the lids which may extend to the whole face.

4. Chemosis and inflammation of the conjunctiva with corneal involvement from exposure, often with ulceration.

5. Usually optic neuritis.

6. Tortuosity of retinal veins.

7. Paresis of both external and internal muscles of the eyeball.

Quoting from Bull, "Hessler find that most of the symptoms may be present in pure, uncomplicated thrombophlebitis of the transverse sinus but that they are found more frequently and combined with each other in progressive sinus-phlebitis. The only additional symptom in thrombophlebitis of the cavernous sinus besides those of the transverse sinus is swelling of the eyelids produced by direct stasis of the ophthalmic veins."

In the above syndrome the second, third, fourth, ophthalmic division of the fifth, and the sixth nerves are involved.

In a few of the cases reviewed the seventh nerve has been involved in the disease.

In several cases, especially when the trouble started in the ear, the 8th nerve, and in many the 9th, 10th, 11th and 12th were affected shortly before death.

The case here reported presented all of these classic symptoms with the following modifications:

1. There was not internal ophthalmoplegia.

2. There was only moderate involvement of the cornea.

3. There was only beginning optic nerve involvement, due to the brevity of the duration of the case.

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TREATMENT OF SEPTIC AND INJURED JOINTS.*

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Perhaps the two greatest changes in surgical practice, brought about through war experience, are the modifications and alterations in the methods of treatment of fractures and of injured or infected joints. In other departments of surgery improvements have been made along the lines of simplicity, accuracy, and speed; but in these two departments the changes have been radical and basic. The most advanced thought and methods of a few men who treated these types of surgical cases really well before the war, have been codified, expanded and tried on huge numbers of patients, and then, a thing of far more importance, taught to a large number of average surgeons. The great mass of material has stimulated thought and experiment in a way never

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known before. Surgeons have had an opportunity to invent and then to test their inventions. The result has been that numbers of radically new procedures have been grafted on the best of the old procedures, and we have emerged from the war with a whole series of rational, logical, consecutive methods for the treatment of injured bones and joints.

Many of these methods still require to be perfected in detail, and some of them are still in their experimental stage, but taken all together they represent a tremendous advance in our knowledge and armamentarium. The best of the old ideas have been vindicated anew, in some cases to a startling degree. For example, the efficiency of the Thomas splint for extension and fixation of fractures was known forty years ago, as was the value of motion and function in damaged joints. Both before the war were commonly ignored. Both, however, have been so dramatically re-demonstrated during the war that they have sometimes seemed wholly new. Indeed they have been new to the younger generation of surgeons. Really new principles, such as those involved in "debridement" and primary and secondary closure of septic fractures and joints have given us added resources.

The principles evolved during the war for treatment of fractures and joints are of particular value now in a manufacturing community because of their application to industrial surgery.

We shall be remiss in our duty to our patients, if we forget our war lessons and revert to pre-war standards and apparatus in the treatment of industrial injuries. We must remember that a fracture or an infected joint is the same and calls for the same high grade of treatment, whether it is caused by a high explosive shell, or by a whirling belt. In the latter case we can only be thankful that the sepsis of peaceful pursuits is ordinarily a mild and gentle thing compared to that of the battle field.

We must avoid the point of view of a group of American surgeons who came under my notice in England. They had a ward of thirty-six patients, thirty-five of whom had battle compound fractures of the femur. All these were perfectly dressed, and splinted practically without shortening on the best principles of war technique. The thirty-sixth was a small boy with a simple fracture of the femur. He had marked bowing and two and one half inches of

shortening, and was dressed in a badly fitting, badly applied long DeSault splint with an insufficient extension. When asked for an explanation of this curious anomaly, the surgeons replied in an off-hand manner, "Oh, he is a civilian fracture and we dressed him as we always have dressed civilian fractures of the femur at home." Evidently to these individual minds it was preordained by fate that the unlucky person who broke his femur in civilian life should go on his way forever after with a short leg and nobody should interfere to prevent the workings of Providence.

Such a point of view has been encouraged by much of our medical school teaching, which condones as satisfactory anything up to an inch of shortening after a fractured femur. Such a point of view explains many of our most harassing suits for mal-practice. It is a wrong point of view, I assure you, as the results of the war have proved. Thousands of compound comminuted septic fractures of the femur have come through their injuries under the treatment of British, French and American surgeons, without shortening or other disability, except that left by actual destruction of muscle tissue. Henceforth, if we are honest, we shall have to apologize to ourselves and our patients not for patently bad results in fractures, but for anything short of perfection of alignment and length, when the injury has not actually removed large masses of bone or completely devitalized them.

The same remarks apply in a less degree to injured and infected joints. We have always been taught to believe that a joint fracture or a joint infection necessarily leads, except in rare cases, to a stiff joint, or to a joint at least much limited in function. The war has taught us the opposite. We have learned that a large proportion of injured and infected joints can be restored to conditions closely approximating normal function. This statement leads me to the main subject of my paper, the treatment of joint injuries and infections.

It has always been felt that there was some factor inherent in joint structure that made it particularly non-resistant to infection. How often we have heard it said that the peritoneum will take care of much infection or trauma, but that the synovia of the knee joint will not, and yet the two structures are much alike histologically. Why is this statement made? For two reasons. The blood supply to the synovia is less because there are less blood vessels in its

neighborhood. Its walls are more rigid, and therefore effusion more quickly causes pressure and further lessens blood supply, therefore, the nutrition of an injured joint is necessarily poor. It follows then that under ordinary circumstances, traumata and infection are less well cared for in joints, for blood supply is everywhere the prime requisite to prompt healing.

If we are to get good results in our damaged joints, then we must always remember their nutrition and improve the blood supply in every way. This is the cardinal principle in the treatment of joint disturbances. It applies equally to every type of joint, whether it be the stiff joint which follows the splinting of fractures or the virulent septic joint which unhappily follows, occasionally, the removal of the torn semi-lunar cartilage.

Secondary to this main cardinal principle of maintenance of blood supply are other important principles which depend on the type of joint with which we have to deal.

First, in simple fractures involving a joint surface, perfect reduction of the fragment is of prime importance, because any displacement of the bony structure in the narrow confines of the joint space must mechanically interfere with function regardless of the damage to the synovia. Inability to replace fragments in a fracture involving a joint by manipulation is to my mind practically the only indication for surgical interference in a fresh simple fracture.

Second, in compound joint injuries open operation carried out under the most perfect aseptic technic for the removal of devitalized and infected tissue is absolutely necessary. Such operation is difficult, but must be carried out so carefully and gently as to preclude further trauma, and yet so thoroughly as to include every crevice of the wound.

Third, in joints where active sepsis is already established, immediate and thorough drainage must be obtained at the earliest possible moment. This drainage must be skillfully made with an eye to future function in order that further damage to important structures may not occur. Establishment of proper drainage in any joint requires a most thorough knowledge of joint anatomy.

Fourth, in any type of joint trauma or infection, early resumption of function is of greatest importance. By the resumption of function is meant, not occasional passive manipulation, but frequent voluntary active attempts at motion by the patient himself. Passive motion by the

massuse or surgeon is at best sporadic. It is dangerous because of the temptation to "go just a little further" and thereby produce further trauma. Active motion by the patient interests him because he is made to realize it is for his own good, and he therefore makes it more or less continuous. It is safe because pain automatically controls it before it does harm.

Fifth, in all types of joints, massage of the neighboring parts, and application of heat to the joints themselves is of value. Massage to the joint itself in any type of acute disease is of doubtful value.

Sixth, in any type of joint avoid prolonged fixation.

In the last analysis, all six of these subsidiary principles of joint treatment go back to the basic principle of maintenance and encouragement of nutrition to joint parts through improvement of circulation. Replacement of a fragment reduces abnormal pressure. Removal of devitalized and possibly infected material tends to reduce effusion, and keeps down pressure. Drainage reduces pressure and encourages resorption. Active voluntary function brings blood to the neighboring parts and by producing motion in the joint increase its circulation.

In considering the application of these principles to the treatment of joints, let us take up a few of the well-known types.

First and best known of all, the stiff joint following the simple fractures of long bones, stiff fingers, wrist, elbow or shoulder in fracture of the forearm. Stiff knee after fracture of the femur, or stiff elbow after low fracture of the humerus. In this class we shall not include fractures which actually involve the joint.

In all of this type of case, our first duty is of course to secure good alignment and union of the fragments. In practically all, this can be done by simple efficient traction applied in the line which the fragments themselves tend to assume. By this is meant that no amount of traction in the mesial plane will reduce the high fracture of the femur, nor with extension of the knee will it reduce the fracture of the lower third of the femur. In abduction and flexion, however, very little traction will reduce the first and with flexion of the knee it will suffice in the second. Traction on a fracture of the humerus with the arm at the side will often prevent union because gravity will actually pull the fragments apart, whereas with the arm at

right angles to the body the amount of traction can be accurately controlled. Intelligent use of traction along these lines will almost without exception secure good reduction and union, and do away with that bane of surgery, the bone plate, and all other forms of open operation on simple fractures.

With the fracture once reduced and held in good position, the problem of the surrounding joints immediately presents itself. We must prevent the stiff joints which so often haunt us for months after the fracture is healed. The solution of this problem, lies in the application of the great principle, the improvement of circulation. How can this be done? First and foremost by the avoidance of prolonged fixation in any one position. The forearm fracture must not be held rigidly at the side for weeks if we are to avoid painful stiff shoulders. The apparatus must be so arranged that from the first the patient may daily put his shoulder through the whole range of motion. In the same way the splints must bear such a relation to his fingers that he can move them. The joints which are contiguous to the fracture, the elbow and wrist, must of necessity be kept at rest until some fixation of the fractured fragments has occurred, but at the first possible moment, the splints should be shifted frequently so that motion of the elbow and wrist are allowed.

In fractures of the femur, motion of the knee should be begun as soon as the first signs of union appear. This can easily be done by the use of a little ingenuity, in connection with the slings and extension of the Thomas splint. Massage of the joints in the neighborhood of the fracture undoubtedly assists in the prevention of stiffness and should be begun very early. In occasional cases, motion of the joints will be found to be impracticable without motion in the fragments. If this is the fact, the joints must be ignored, because motion of fragments is the greatest enemy of union. If the principle of motion of joints from the earliest possible moment is always kept in mind, the percentage of stiffness after simple fractures will decrease enormously.

In fractures involving joints, such as the "T" fractures of the radius or tibia, immediate complete reduction of the fragments under the eye of the X-ray is absolutely essential. If manipulation under a general anesthetic is insufficient, then aseptic operative replacement must be resorted to. Under such circumstances,

it is only in the worst cases that any foreign body should be introduced to hold the fragments. If properly replaced they will almost invariably hold themselves if the joint is held in a favorable position. When once replaced, the damaged joint should be held at rest a minimum of time. Usually ten days will suffice to get rid of swelling and allow sufficient organization so that gentle active motion of the joint may safely be begun, and carried out systematically, so that full motion and solid union are obtained together.

Compound injuries of joints present the problem of sepsis. The small wounds should be excised, cleaned out thoroughly and closed. Larger wounds should be cleaned out or "debrided" radically, and closed primarily if possible. Both should then be watched for the first signs of sepsis. If this appears, they should be opened widely without delay, Carrel Dakin treatment is then valuable if it can be carried out in all its detail. Otherwise simple, very frequent dressing with any aseptic solution which prevents blocking of the discharges should be used. In the early stages of sepsis in joints, conservative opinion still is that rest is essential in order that nature may limit the infection as much as possible. In frank full-fledged sepsis there is no doubt that voluntary motion promotes drainage, this is particularly true of the simpler joints like the knee and ankle, less so of the wrist and elbow. Certain it is that voluntary motion should be begun in all joints as soon as the sepsis has begun to subside.

The late management of these septic joints requires great judgment. It must include such splinting that contractures will be avoided, and every possible method to improve motion and nutrition. Active motion, massage and heat are the principal standbys.

With all our care, there are certain joints in which the resumption of normal function is patently hopeless. These are those that are completely disorganized, or those in which synovia and cartilage have been destroyed. The aim to be kept in mind in such cases is to obtain a stiff joint in the best position for the uses to which it is to be put. In certain joints this position is easy to determine. For a man the best position for a stiff knee is unquestionably about 15 to 20 degrees of flexion. In a woman, about 30 to 35 degrees. In the ankle five to ten degrees of dorsi flexion makes walking easiest. In the wrist 20 to 30 degrees of

dorsi flexion gives the fingers the most powerful grip. In the elbow, the patient's occupation should be the determining factor. As a rule about 120 degrees is the best, but special occupations require special positions.

Mobilization of already stiff joints is a difficult field, and depends entirely on the cause of the fixation. Bony ankylosis, total or partial, is generally best left alone if position is satisfactory. If for any reason, such as the keen desire of the patient, it is necessary to obtain motion, operation may be tried. The best type of operation depends on the joint. Arthroplasties, with the interposition of some form of membrane or flap are principally useful in the hip. In all other joints simple excision done with exact care and judgment to remove enough bone, but yet to preserve ligamentous and muscular attachment are best. Attempts to obtain motion in knee joints which are ankylosed by bone are almost uniformly failures because they substitute weak, painful, partially movable joints for strong, stiff, painless ones.

Where stiffness is due to adhesions, atrophy, or inflammatory thickening, slow gradual methods of stretching and voluntary exercise are uniformly more satisfactory than forcible passive manipulation. Few indeed are the cases where forcible manipulation under an anesthetic is of the slightest permanent good. Patience and gentleness give the best results.

SUMMARY.

To sum up then: .

Restore normal relations as nearly as possible.

Drain sepsis.

Remember that voluntary motion hastens return of function.

NON-TUBERCULOUS PLEURISY.*

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In this paper the discussion will be limited to "The Occurrence of Non-Tuberculous Fibrinous Pleurisy" and therefore cases of empyema and exudates will be excluded.

Considering the fact that most cases of fibrinous pleuritis are caused by the action of the tubercle bacilli, there still remain a sufficient number to require careful consideration and study.

Massachusetts General Hospital records state that out of 225 routine post mortem cases, 160 showed pleural involvement. The extent of pathology in these cases varied from small limited adhesions to frank inflammatory changes.

Lord (1) states that although the tubercle bacilli is the frequent cause of pleuritis, either alone or in combination with other organisms, it is not yet possible to state, with any degree of accuracy, in what proportion of cases it is a factor. He is also of the opinion that fibrinous adhesions and scars so commonly found in the pleura, especially in the bases and apices, may be accounted for by causes other than the tubercle bacilli.

This last point is worthy of thought on account of our present tendency to consider the majority of thoracic adhesions demonstrated by the X-ray, as evidence of past or present tuberculosis, regardless of the fact that no other indication of pulmonary pathology can be found.

Fibrinous pleurisy may be roughly divided into primary and secondary cases. The tubercle bacilli together with associated organisms are by far the most common cause of primary lesions, while traumatism accounts for a few cases.

SECONDARY TYPE OF FIBRINOUS PLEURITIS.

The secondary type is that which concerns us most in this paper. It may arise from many infections other than tuberculosis, such as non-tuberculous affections of the lungs and bronchi, as well as extra-pulmonary lesions in the endocardium and pericardium, tonsils, teeth, upper respiratory tract, liver and gall bladder region. Peritoneal infections, infections of the appendix and of the uterus also cause inflammatory changes in the pleura, while typhoid fever sometimes leaves a pleurisy as a sequela.

INTRAPULMONARY CAUSES: PNEUMONIA.

Of the intrapulmonary causes of plastic pleuritis the pneumococcus and its associates are the most frequent. This association is a well known aid in diagnosis. The on-set of pneumonia, especially when the diaphragmatic pleura is initially involved, sometimes causes considerable confusion in diagnosis owing to the location of the pain.

Capps (2) in his splendid article "Clinical Study of Pain Arising from Diaphragmatic Pleurisy," has clearly shown that the visceral pleura is not sensitive to pressure, and that irritation of the parietal layer causes sharp pain

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over the corresponding cutaneous area. Capps' further studies on the diaphragmatic pleura revealed the fact that when the outer margin of the diaphragm was irritated, the pain did not occur over the corresponding topographical area, but manifested itself in the hypochondrium and abdominal walls, sometimes as low as the groin. This reflex pain was probably due to the fact that the marginal pleura receives its sensory nerve supply through the lower six intercostals, and that the referred pain was attributal to an irritation of the corresponding sensory segments in the spinal cord which supply the abdominal wall.

Irritation of the central pleural surface of the diaphragm, however, caused pain in the neck along the trapezius muscle working through the phrenic nerve and third and fourth cervical segments.

To summarize the sensory manifestations of acute basal pleurisy: Only parietal involvement causes pain over the affected serous membrane in the majority of cases. When the outer half of the diaphragm is involved, referred abdominal pain is often present. If the process extends to the inner half of the diaphragm sensory disturbances along the trapezius are also registered.

Acute fibrinous pleurisy is not necessarily tuberculous and the following case is cited as an example:

Case No. 101661, male, married, age 32; height, 5 feet 8 inches; weight 150 pounds. Previous history unimportant except that one maternal aunt died of tuberculosis. Patient consulted internist on account of severe pain in the left thorax between the fourth and seventh ribs in the axillary region. This pain was associated with a catchy cough, some bloody expectoration, night sweats, and an afternoon temperature of from 100 to 100.3. Pulse, 90 to 100; respiration 24. The clinical symptoms had persisted for the previous sixteen days. A physical examination showed some retraction over the right apex associated with markedly roughened inspiration in front, while over the axillary region of the left lung, a point at which the patient felt pain, saddle-rub friction and pleural rales could be heard on auscultation. Stereo plates showed a pleural cap over the right apex, and a small limited subpleural, smoke-like shadow under the pleural involvement in the left thorax. The ultimate study of this case showed it to be one of aspiration pneumonia, or early pulmonary abscess, probably the sequelae of a tonsillectomy performed six weeks previous. The case was re-examined every few weeks and during this time, the pathology gradually disappear-

ed. A final investigation which included stereo plates made at the end of the tenth week revealed no abnormality.

This case presents pleural findings and clinical symptoms suggestive of tuberculosis, and a mistake could easily have been made in considering the night sweats, blood spitting, temperature, and cough, associated with the physical findings and acute pleurisy as conclusive evidence of pulmonary tuberculosis.

OTHER INTRAPULMONARY CAUSES.

Such pulmonary affections as bronchiectasis, gangrene, abscess, bronchitis and cases of streptothricosis and actinomycosis can easily cause a plastic pleuritis, either by direct extension or by secondary infection through the lymph channels. Pulmonary infarction may cause pleuritis. Actinomycosis of the pleura alone is rare. It usually occurs from a similar lung lesion or from actinomycosis of the epiglottis. The same infection in the abdomen has been known to rupture the diaphragm.

Streptothricosis of the pleura is nearly always secondary to lung involvement.

Syphilis of the pleura is a very infrequent occurrence, but does occur associated with specific disease of the lung. The following case suggests such a condition:

Case No. 67836, male, age 43, married; weight, 226 pounds; height, 6 feet 4 inches. Complaints of bronchitis of long standing. Has a daily temperature of 99.6 to 100. Pulse 96. Physical examination and chest stereos show that the lower left thorax is filled by a massive lesion involving the pulmonary tissue and the pleura. The Wassermann reaction was four plus and persistent. Salvarsan was administered by the usual method for a year's time. This was accompanied by a progressively favorable change in the lesion. After treatment, the pulmonary involvement had almost disappeared; the only remaining evidence was a considerable amount of pleural thickening. The behavior of this lesion under specific medication suggests its probable luetic nature.

Finally, bronchial glands harbor many infective agents which frequently find their way to the pleura.

SECONDARY PLEURISY ARISING FROM EXTRA-PULMONARY SOURCES SECONDARY TO LOCAL DISEASE IN ADJACENT ORGANS.

Secondary pulmonary involvement is not an infrequent occurrence in infections of the peritoneum. The lymphatics of both serous cavities are in close proximity. The following case illustrates such a condition:

Case No. 10260, male, age 51, Comes to internist complaining of night sweats, cough, expectoration with pain in the left lower axillary region of the thorax. The above clinical picture had existed for about six months and during that time the patient had lost over forty pounds in weight. A physical examination showed pleural crepitations over the seat of pain in the left thorax, with slight dulness on percussion. Stereo plates revealed a small amount of fluid. Some abdominal pain, indefinite in character, together with evidence obtained in the history, led the surgeon to make an exploratory abdominal incision. This revealed a malignancy of the spleen, with peritoneal involvement. Cultures obtained at operation from the peritoneal inflammatory surfaces gave a frank growth of *B. Coli*. The associated pleurisy in this instance was undoubtedly secondary either to the abdominal malignancy or the superimposed colon bacillus infection. This case had been twice diagnosed as pulmonary tuberculosis with acute pleurisy.

Pericardial infections will often cause a secondary pleural involvement which is difficult to diagnose. Capps' (2) experiments showed that when this area was affected, pain in the neck was often manifested, acting through the phrenic nerve, as in the case of central diaphragm irritation.

OTHER EXTRAPULMONARY DISEASES CAUSING PLEURITIS.

Pleurisy is sometimes associated with certain forms of rheumatism and terminal diseases.

Venous congestion which causes the pulmonary tissues to be chronically bathed in lymph often sets up a chronic irritation of the pleura. It is questionable if this in itself causes fibrinous adhesions, but such a condition can and does stimulate the further development of small foci already imbedded in the pleura, the exaggeration of which may cause permanent adhesions.

Shaw (3) performed experiments on rabbits which showed that a collapsed lung was more susceptible to invasion by the tubercle bacilli than the remaining overworked organ. This in turn gave rise to the idea that old adhesions and pleural effusion which render portions of the lung immobile may cause a suitable field for the tubercle bacilli and that such adhesions might, in some cases, be considered the cause rather than the result of pulmonary tuberculosis.

CONCLUSION.

In the light of our present knowledge of focal infections, is it not reasonable to think that small patches of pleural irritation as well

as frank lesions, may come from the dissemination of extrapulmonary non-tuberculous, focal infections?

REFERENCES.

1. Lord: Diseases of the Bronch. Lungs and Pleura; p. 467.
2. Capps: Amer. Jour. Med. Sci., March, 1916, vol. CLI, p. 383.
3. Shaw: Amer. Rev. Tuberculosis. vol. 3, page 410.

RESUME OF A SERIES OF CASES OF ECTOPIC GESTATION AND RUPTURED GRAFFIAN FOLLICLE

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We had in our service between May 8th and May 28th, at Harper Hospital, five cases of ruptured ectopic gestation, one of acute hemorrhagic salpingitis and two ruptured mature Graffian follicles, also a ruptured ectopic operated in rural Michigan.

Chart of the histories of those cases on next page.

A. The pathological specimens were all examined by Dr. P. F. Morse, of Harper Hospital, who confirmed the clinical diagnosis.

B. In three of these ectopics, the rupture of the tube took place within the proximal one inch and these cases showed larger quantities of blood and clots and extreme shock. In this series we did not find any of the so-called tubal abortions. In the two cases of ruptured mature Graffian follicles, the symptoms were very closely allied to those of ectopic, the point of rupture, usually taking place about the center of the posterior or free surface of the ovary. We found in both instances small blood clots attempting to plug the opening, at the point of rupture.

C. Case ectopic, number three, in table, was admitted to the hospital, after being sick at home for five days before calling a family physician, as one of intestinal obstruction, very great distention of abdomen only partially relieved by enemata. At the time of operation, numerous large plastic clots were removed from the loops of the intestine; as the paresis persisted, in spite of frequent gastric lavage and enemata with pituitrin, 48 hours after operation an Enterostomy was performed, but this did not relieve the patient and she gradually weakened and died in three days from ileus.

In conclusion, we wish to emphasize, that in our experience, there have been many ruptured ectopics without history of "missed" men-

	Ectopic						Rupt. Foll.		Acute Hem. Sal.
	1	2	3	4	5	6	7	8	9
1. Age	28	31	43	35	28	23	22	30	24
2. Previous Pregnancies	0	2	1	0	3	1	0	1	1
3. Previous History Pelvic Inflammation	yes	0	yes	0	0	yes	0	0	yes
4. Normal Menstruation	0	0	0	0			yes	yes	yes
5. Number of periods missed	0	1	0	2	0	0	0	0	0
6. Normal onset, amount scant, spotting	yes	yes	yes	0	yes	yes	0	—	—
7. Hemorrhage (Metorrhagic)	0	0	0	1	1	0	0	—	—
8. Sudden severe tearing pain lower quadrant of abdomen	yes	yes	yes	yes	yes	yes	yes	yes	yes
9. Pain in rectum	yes	yes	no	yes	yes	yes	no	yes	no
10. Pain radiated down thigh	yes	yes	yes	yes	yes	yes	no	no	yes
11. Nausea	yes	yes	yes	yes	yes	yes	yes	yes	yes
12. Vomiting	yes	yes	yes	yes	yes	yes	yes	no	yes
13. Shock	slight	extr.	yes	mark.	extr.	slight	no	no	no
14. Fainting	yes	yes	yes	3x	4x	yes	no	no	no
15. Temperature	99	100	99	101	100	99	102	99	101
16. Pulse	116	122	112	120	120	120	104	110	110
17. Abdominal tenderness	no	yes	yes	yes	yes	yes	yes	yes	yes
18. Abdominal Mass palpable	no	yes	no	yes	yes	no	no	no	no
19. Pelvic Mass palpable	yes	yes	yes	yes	yes	yes	no	yes	?
20. Leucocytosis	yes	yes	yes	mark.	mark.	omit.	slight	yes	yes

strual period and in many cases there is a history of normal onset, scanty flow, with spotting. Along with the characteristic symptoms of rupture, we have noticed that these patients complain of pain in the rectum and pain referred down the thigh on the affected side.

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THE COMMONER CLINICAL TYPES OF
ACUTE PULMONARY EDEMA AND
THEIR TREATMENT.
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We shall have little to say about the chronic edemas, arising from passive congestion such as one finds in old mitral disease, or about those occurring towards the end of exhausting diseases; such as tuberculosis, pernicious, anemia, or diabetes. In such cases, there is little exudation, and life is not so immediately threatened as in the acute edemas under consideration.

Acute pulmonary edema is due to the sudden effusion of serous fluid into the air vesicles and interstitial tissues of the lungs. It is not a disease 'sui generis' but is secondary to a variety of conditions. It is for this reason that it is a serious clinical problem, for a careful

etiological diagnosis must be made in order to render efficient treatment as well as to make a safe prognosis. There is no more alarming condition which the physician is called to treat, and its therapy at the best is very unsatisfactory. In many cases, it is a terminal affection; so that Cohnheim said, "A man does not die because he gets edema of the lungs, but he gets edema of the lungs because he is on the point of dying." This is an extreme statement, for there are cases in which we can save the patient from a certain death. Furthermore, even if we are almost sure that death will claim its victim, the laity always expect us to do something"

PATHOLOGY.

There are two main groups of cases, viz (1) Inflammatory, such as one sees in influenza, and which has been so well described by Sahli, and (2) Non-inflammatory or Mechanical. In an attack, the capillaries of the lung rapidly dilate and serum exudes into the interstitial tissues and into the alveoli, soon filling the bronchi. The increased permeability of the vessel walls is probably not due entirely to mechanical causes, but is also due to the local action of toxins bacterial or otherwise. On section through the boiled lung, one finds the alveoli dilated, their walls swollen, and the blood vessels distended. The alveoli are full

of a greyish opaque mass, mixed with desquamated epithelial cells and leucocytes, these latter occurring in great numbers if the edema is an inflammatory one.

SYMPTOMS AND SIGNS.

The onset is sudden, with great dyspnea and extreme collapse. The patient presents an anxious appearance, his hands and feet are cold, and he may have cold sweats. There is no fever unless the underlying affection is a febrile one. The most important diagnostic criterion of acute pulmonary edema is the profuse expectoration of a thin frothy, bloodstained sputum, in severe cases exuding from the mouth and nostrils in large quantities. It is rich in albumen and soon coagulates. There is a varying amount of cyanosis. The findings on percussion are variable. Usually the note is tympanitic or hyperresonant. If the attack lasts a few hours, one may get an impaired note at the bases behind, and a tympanitic note in front. On auscultation crepitant and loud moist rales are heard all over the chest. The pulmonary second sound is accentuated. The X-ray picture shows a diffuse mottling.

IN CARDIO VASCULAR RENAL DISEASE.

Attacks of acute edema of the lungs are frequent in chronic nephritis with hypertension. The left ventricle, under abnormal strain becomes hypertrophied, but gradually, the limit of cardiac reserve is reached, for the heart muscle is involved by fibrous changes. Thus we find progressive weakness of the left heart, and so a disproportion between the work of the right and left heart. Following any unusual exertion, a sudden alarming attack of pulmonary edema may occur. It is likely that toxemia may also increase the permeability of the pulmonary capillaries. The milder attacks pass off promptly enough after a little rest, but many of them require the most energetic treatment to save the patient. The prognosis should be guarded in any case, for while one may see such patients with occasional attacks of cardiac insufficiency over many years, however, these breakdowns mean the beginning of the end; for they indicate that the cardiac reserve power is being gradually used up. The patient should be put to bed and propped up. Venesection is of great value. Bleed until the blood pressure falls to about 160. If the dyspnea is intense, give morphine gr. 1-8th Atropine gr. 1-150. A drop of spiritus glycerilis nitratis on the tongue, may be used to relieve arterial tension,

and may be repeated every half hour until the attack passes off. Rest in bed is imperative and the diet should be restricted, especially as to proteins. The patient must be warned to limit his exertion and to guard against exposure to extreme cold. Cardiac stimulants such as digitalis may be necessary, and saline purgatives may be given as needed.

IN ACUTE NEPHRITIS.

A moderate edema of the lungs is frequently observed in the early stage of an acute glomerular nephritis. We saw it a great many times in cases of so-called trench nephritis in 1916-1917. On account of occlusion of the glomeruli, the excretion of water is interfered with, and the retained toxines may irritate the pulmonary capillaries. At the onset of nephritis, it is part of the general edema and is not generally serious, but in the later stages, it may be the result of a final heart failure and so be of grave significance. Incisions in the legs will drain off a lot of fluid. Elaterin gr 1-10 in three hourly doses in the early morning hours, or magnesi sulphas one ounce in hot water are old standbys. Hot air baths or hot packs may lower arterial tension and start diaphoresis. Pilocarpine is to be avoided as it increases edema of the lungs. Epinephrin is not safe, because the adrenal system is already over active in nephritis. Liquids in large quantities, proteins, broths, spices, and alcohol should be forbidden. During the first three days, limit the diet to: Juice of one lemon, $\frac{2}{3}$ cup of water, 6 tablespoonsful of milk sugar. Serve this four times a day. This contains about 1500 calories, contains no protein, and tends to make the blood and urine alkaline. After a few days, the excessive protein waste will be excreted, and a more liberal diet may be given.

IN HEART DISEASE.

In aortic disease, especially aortic insufficiency, much more rarely in stenosis, aortitis, and coronary sclerosis, attacks of acute edema of the lungs occasionally occur and are often fatal. Overstrain may produce a sudden dilation of the left ventricle, the mitral ring stretches, and the mitral valves become incompetent. In the meantime, the right ventricle continues to act as usual, and thus the tension in the pulmonary capillaries is increased. This produces transudation into the alveoli and interstitial tissues, not only at the bases, but more or less generally. Acute edemas very rarely occur in

mitral insufficiency, for the stasis is always gradual in such cases, but in mitral stenosis they are not so rare. Hypertrophy of the right ventricle may maintain a satisfactory circulation for several years, but as the lesion is a progressive one, sooner or later, attacks of decompensation occur and the lungs become rapidly engorged. Sometimes relief is obtained by a profuse hemoptysis, or by a sudden dilatation of the tricuspid rings. In chronic myocardial degeneration, cardiac feebleness becomes progressive and a little unusual exertion may cause a serious dilatation of the heart to occur. An attack similar to asthma comes on, but with frothy mucous expectoration, anginoid pains occur, and an acute pulmonary edema may terminate the scene. Certain cases of paroxysmal tachycardia in which the attacks are of some length, may develop an edema rather acutely. Death may occur at this time, but more often, a normal rhythm is established and the patient is safe for the time being. In elderly patients with muscle or valve involvement, the prognosis should be guarded. If we are to save these heart cases, treatment must be prompt. For the anxiety and distress, nothing equals morphine. If the veins are distended, a venesection should be done. Cardiac stimulants should at first be given intravenously. My favorite is Digalen which usually gives results in 2 to 5 minutes. If the patient improves enough to take oral medication, follow this up by full dosage of digitalis. As you all know, digitalis is slowly absorbed and it often requires several days to note the effect. The Eggleston system of dosage is to be preferred in which the amount of tr. digitalis necessary to digitalise the patient is given in the first 24 hours. Give $2\frac{1}{2}$ minims per pound of body weight, using a standardised tincture. Give this amount in four doses six hours apart. This should be followed up by a smaller tonic dose for several days. Another drug which occasionally works wonders, is strophanthin intravenously. Give it very slowly, in dose of 1-250 grain and repeat in two hours if necessary. This drug seems to act specifically on the myocardium, increasing tonicity and contractility. If the patient has been taking digitalis before the attack, one must be cautious as to dosage; for the establishment of tonicity may allow the digitalis to become active and so produce a heart block. Nitrites should not be given unless the blood pressure is very high. I know of no specific treatment for paroxysmal tachycardia. If the pa-

tient survives one of these acute attacks of edema, good care must be taken of the general health, sudden exertion or excitement are to be avoided, and attention must be paid to the underlying cardiac pathology.

IN THE ACUTE INFECTIONS.

In any of the severe acute infections, especially in pneumonia, sepsis, typhoid, acute edema of the lungs may occur. The edema of influenza is somewhat different and will be discussed later on. In these infections the edema is due to heart failure. The myocardium degenerates from starvation, toxemia, or infection. There is also toxemia of cardiac conduction system as well as vasomotor paresis. In treatment, it is important to not disturb the patient. Frequent or exhausting examinations should not be made, nor must the patient be allowed to make any exertion. Abdominal distension must be kept down. Feeding should be as liberal as digestion will tolerate. Little is to be expected from cardiac stimulants on account of the widespread degeneration of the heart muscle fibres, however they are generally used as a last resort. Digalen, in small doses, e. g. min. 5, intravenously or intramuscularly, is as useful a preparation as any. Atropine, in small doses, e. g. gr. 1-150 every 4 to 6 hours checks bronchial secretion and is a vasodilator. Large doses must be avoided as the drug may cause retention of urine. If the patient is very restless, a small dose of morphine will give repose and improve the nervous condition. For emergencies, caffein sodio benzoate gr. 3 subcutaneously is an effective stimulant. Camphor in oil is a great favorite in Germany, but most American pharmacologists find little evidence of its stimulating effect. An icebag to the precordium is a comfort to the patient. Pituitrin and adrenalin have bad secondary effects. Strychnin is going out of favor, for it is not a heart stimulant, although it is a respiratory stimulant. Salt solution by hypodermoclysis, or soda bicarb and glucose intravenously, or per rectum are helpful at times, especially if there be profound toxemia and vasomotor paresis. If used at all, these solutions must be given sparingly and not repeated too frequently lest they increase cardiac dilation.

IN INFLUENZA.

During the recent epidemic, there were many cases of acute pulmonary edema, differing in many respects from any clinical picture we had ever seen. It was rarely ever seen in the lobar pneumonia type but was common in the bron-

pneumonia type, but was common in the broncho-pneumonia form. While the exact etiology of influenza is unknown, it would appear to be complicated by infection with hemolytic streptococcus, which organism seems to produce an acute hemorrhagic infection of the entire air passages. The cough is loose, and the patient usually spits up large quantities of frothy, blood tinged fluid, and in some cases it pours out of the mouth or nose on changing position. This sputum is in marked contrast to the scanty, sticky, rusty sputum of a classical lobar pneumonia. The earliest signs are found about the angles of the scapulae, or between the scapulae. The moisture in the lungs rapidly increases, and soon crepitant and bubbling rales are heard over almost the entire lung area. There is no general edema, little change in the heart outlines, and thus little evidence that the edema is due to a falling heart. It is more likely that the edema is an inflammatory one, due to the local effect of the bacterial toxins on the bronchial and alveolar tissues. The unfortunate patient usually dies in 24 to 48 hours of asphyxia, literally drowned in his own secretions. Autopsy shows an acute inflammatory edema general in distribution, and no evidences of an acute myocarditis. No special treatment seems to have all of these unfortunate patients. Atropine seems to help a little. Morphine gives subjective relief for a time. Oxygen inhalations may relieve the cyanosis, but does not change the ultimate result. While there is not any definite indication from the pathological findings for the use of heart stimulants, digitalis, caffeine and camphor are quite commonly used.

Time will not permit to discuss the rarer edemas following anesthesia, trauma, thoracocentesis, gas poisoning, mushroom poisoning, and severe burns. These will be treated, however, on indications from the pathology in each case, and on the general principles outlined above.

404 Bush Building.

ADDRESS DELIVERED AT THE FIFTIETH ANNIVERSARY OF THE
FOUNDING OF THE DETROIT
ACADEMY OF MEDICINE,
DECEMBER 9, 1919.

W. P. MANTON, M.D.
DETROIT, MICH.

To have survived the vicitudes of fifty change-ful years, with a shifting medical population; to have outlived death and remain strong and

virile and with still an upward bent, is surely a great accomplishment, and proof enough that the founders of the Detroit Academy of medicine planned better than they knew, and wasted no energy in unstable qualities. It is, therefore, eminently fitting that on this the society's golden anniversary, some recognition be taken of the earlier years, and particularly of the men who were back bone and sinew in the days when medical science was still in its infancy, but about to break the bonds of its swaddling clothes.

The past twenty-five or thirty years have seen more progress in the art of healing than had as many preceding centuries; and the opinions of those of earlier days, who were struggling toward the light, are not mere curiosities, but as worthy of attention and consideration as any more recent attainments, which have come about largely through the masterly insight and learning of former generations of the profession. While we may not wholly accept the maxim of the old Polish king that "Science when well digested is nothing but good sense and reason," we can all agree that the strivings of the pathfinders in medicine have resulted in our present day successes and knowledge. Looking backward from the present point of vantage one must marvel at the patience and courage of these men who, with comparatively few instruments of precision, with no laboratory facilities, and with few aids beyond current medical literature—abounding in controversy, contradictions and arguments often based on unproved premises—forged onward with unwavering faith; conscious that there was something better in the undiscovered, they did their best to attain the goal.

All honor then, to the forebears of the Academy; and let us pause and bow our heads to the men who, though dead, still live in their works.

The story of the Detroit Academy of Medicine is chiefly interesting as a picture of the men who formed its body, or as Carlyle says, it is, "the essence of innumerable biographies."

REMINISCENCES OF THE EARLY DAYS
OF THE ACADEMY.

BY A. B. LYONS, M.D.

Half a century ago a group of ambitious young physicians in Detroit organized a new medical school—the Detroit Medical College. It was not at first their intention or desire to enter into competition with the ably conducted and successful Medical School of the University of Michigan. That institution, however, from

its rural location could not give its students adequate opportunity for clinical study. What Ann Arbor lacked in this direction, a city with a population of over 70,000 should be able to supply, and it was intended that the new school should affiliate itself with the University school with the distinct object of furnishing to its advanced students the advantages to be gained from Detroit hospitals and medical clinics.

Arrangements were in fact definitely made for courses of lectures to be given in Detroit by members of the University faculty, and it was confidently expected that a considerable number of students who had received University diplomas would come to Detroit for post graduate study. I for one realized that the elementary knowledge acquired by attendance on two courses of lectures (in fact the same course repeated verbatim et literatim twice) could not be regarded as adequate training for a practitioner of the healing art. But the new plan fell through, the University Regents refusing to allow the professors to give the proposed courses of lectures.

Announcements had already gone out of the opening of the Detroit Medical College in the fall of 1868; the local teaching faculty had been organized, and a college building, adequate to immediate needs had been erected in connection with the old Harper Hospital. To provide for a complete course in the elementary branches of medicine, and supply facilities for dissecting and for chemical laboratory work called for strenuous work, but the moving spirits in the enterprise refused to be discouraged.

Just after the term opened, the professor of chemistry, Dr. S. P. Duffield was taken with typhoid fever. I had been acting as his assistant in preparing for his experiments, and so it came about that I took his place temporarily, with a good deal of diffidence, and then I set myself the task of equipping a laboratory for practical experimental work in chemistry, convinced by my own experience at Ann Arbor that this was the only way to really interest the student in chemistry. So it came about that I became a member of the faculty of Detroit Medical College. It was therefore a matter of course that when the faculty of the college organized under the name of the Detroit Academy of Medicine a club for discussion of medical subjects and interchange of views and experiences, that I was privileged to be one of the charter members.

There was not at that time any medical so-

ciety in Detroit that took interest in such discussions. The Wayne County Medical Society was indeed in existence, but one will look in vain for published record of its proceedings. I shall not contend that the Academy in those days made any important contributions to Medical science. That science as we know it today existed only in embryo. But there was such a thing as the art of medicine, and practitioners of that art were keen in the search for the elusive secrets through the knowledge of which the symptoms of disease were being surely brought under control. Theories of the action of remedies interested them deeply, although many of those theories today appear bizarre and even puerile—but who shall say that a decade hence this or that pet theory of the physician of today will not have passed deservedly into oblivion?

It was, however, the facts of experience that were predominatingly the subjects of discussion in the academy, as will be abundantly shown by referring to the published minutes of its meetings. Further, however, the organization consisted not merely of men—in those benighted days they were of course *all men*—keenly interested in everything pertaining to their vocation, it was practically made up of men working together to make the Detroit Medical College a credit to our city and incidentally to its faculty. We did not wish to be known as a clique, yet it was not easy to find in all Detroit even half a score of physicians who would come into the Academy if invited. There were a few who were attracted to just such a medical club as ours, and any such might be sure of a warm welcome. I mention by name one only of this class, Dr. David Inglis, Sr. I am not sure that he was not a charter member. At all events he was as enthusiastic in his devotion to the Academy as any of the college clique, while we on our part felt honored in numbering as an associate one so ripe in professional experience. A man of few words, he was, singularly modest in the presence of the talented young professors who were the leaders in the Academy, but it was certainly these same professors who constantly looked to him for wise counsel. His office became our accustomed place of meeting; it was fitting that in accepting his pressing invitation we should thus tacitly recognize his leadership.

The moving spirit in the College faculty was the professor of Gynecology, Dr. E. W. Jenks. Stout of build, florid in complexion, genial in

manner yet compelling deference, conveying the impression of a well grounded self-confidence, optimistic in disposition, resourceful, convincing in argument, gifted with rare powers of persuasion, and withal having solid financial backing, he held by natural fitness his position as President of the College.

More brilliant as a lecturer and hence perhaps more popular with the student body was the Professor of Surgery, Dr. T. A. McGraw. His subject was one that always appeals to the medical student, but whatever might have been his subject, his fluency of speech and lucidity of diction made it a pleasure to listen to him. He is the only member of the original faculty of the college who survives, bearing lightly the burden of his years.

Perhaps the most versatile and gifted member of the faculty was the professor of the Theory and Practice of Medicine, Dr. George P. Andrews. He was too scholarly perhaps to be very popular as a lecturer, although this very quality secured for him close attention from the appreciative ones among the students. Even to those who failed to follow his lectures, there was something peculiarly winning in his personality and the human touch compelled those who were at all intimately associated with him to remember him as a friend.

Materia Medica is a subject which wakes little enthusiasm in the average medical student. The chair was filled in the Detroit Medical College by Dr. C. B. Gilbert, with the acceptance accorded to scholarly and painstaking endeavor. He was particularly interested in theories in explanation of the action of medicines, and such theories then, as now, seem to the average student rather hazy and unconvincing. Medicine is popularly credited with specific healing powers which close acquaintance fails to substantiate. The successful teacher of *materia medica* puts emphasis on the fact of healing through medication without elaborate explanation of the *modus operandi* of the remedies prescribed.

A ponderous specimen of the genus homo was our Professor of Anatomy, Dr. N. W. Webber. Deliberate in speech, he dealt with his matter of fact subject in strictly a matter of fact manner. Taking himself seriously, he was taken seriously by the embryonic surgeons, who found his lectures meaty, if dry.

The professor of physiology, Dr. W. H. Lathrop was as unlike the expounder of anatomy as one could imagine. He was a dapper young

man, bearing the stamp of New England culture, carrying himself with becoming dignity, indeed, but conveying the impression of a rather frivolous disposition. However in those days physiology was a minor subject for the medical student, easily crammed for an examination.

Dr. Duffield delivered only occasional lectures on chemical subjects, listened to with the attention and interest always aroused by an imaginative and magnetic speaker. My own teaching in this branch I now realize lacked the inspirational power that comes from permitting the imagination to weave about scientific fact an embroidery of truth half glimpsed.

A striking figure in gatherings of the faculty was its senior member, Dr. J. F. Noyes, professor of Ophthalmology. Old bachelor as he was, he cultivated a gruffness of manner that belied his real nature. Tall, rather angular, a typical Yankee, with the characteristic Yankee shunning of any suggestion of suavity of manner, he was yet companionable in a way. In earlier years he had been a general practitioner of medicine in a rural district in Maine, and in the discussions in the Academy he drew freely on the fund of experience and observation he had then stored up, covering a wide range of medical problems. After the death of Dr. Inglis, his office, centrally located at the corner of Shelby and Fort streets, came to be the customary place of meeting of the Academy.

My own part in the early years of the Academy, up to 1888, was that of scribe and reporter of our meetings for publication in the *Detroit Journal of Medicine and Pharmacy*. As an old man, I take pleasure in jotting down these bits of reminiscence of days of *auld lang syne*.

I was asked particularly to touch on the circumstances which led to a wholesale resignation of members of the Academy coincidently with a corresponding split in the faculty of the Detroit Medical College. For twelve years this group of medical men had lived harmoniously in close association, a source of mutual satisfaction and profit. What caused the "split?" Well, we were human—that is about the size of it. It is thus that nations that have lived together in peace for a generation or a century suddenly have a falling out. Gradually friction has developed that has been ignored or denied. Rupture comes suddenly as it did in the outburst of the recent great war.

It may be a generation in such cases before abiding peace is re-established; when that time comes survivors do not care to reopen the old

controversy in which neither party is ever quite free from blame. Rather we choose to live over the days of the old friendliness and harmony, and vow that there shall not again be tolerated a rupture of peaceable relations, provided only differences do not involve questions of principle. But there's the rub!

REMINISCENCES OF THE LATER DAYS OF THE ACADEMY.

BY W. P. MANTON, M.D.

At the time I was elected to Academy membership, Nov. 25, 1884, all signs of irritation and disruption, which Dr. Lyons mentions, had disappeared, and only the calm which follows the storm prevailed. Like the ancient Roman family all worshipped at the same altar, and no mention was ever made of the past. Enough of the oldermen were left—among them a group of the choicest just mentioned—to successfully carry on a medical society. Andrews, Connor, and Henry Cleland were the triumvirs, and the lesser lights rallied around them as moths around a candle.

Only one man, as I remember, was looked upon with some feeling of distrust and toleration, but in a semihostile atmosphere he proved innocuous. The exclusive specialties were just beginning to be represented in Detroit, most of those who devoted attention to favorite subjects still remaining in general practice, so that at this time the Academy numbered among its members only a few who were capable of elaborating on any special matter. Drs. Noyes and Connor represented ophthalmology; Chaney, the nose and throat; Yeamans, dermatology; Hal C. Wyman, surgery; and E. W. Jenks, lately returned from Chicago, and the writer, Gynecology and obstetrics.

The general practitioners were ably led by Andrews and Cleland. Other efficient members were not wanting, some of whom, being of more recent graduation, brought much of profit from the schools.

The semimonthly transaction, important enough in themselves for the times, leave, however, only a tarnished recollection, but the men of those days stand out in cameo clearness, and apart in memory.

As the Academy differed in its social aspects from the usual medical society, its interests were guarded with a jealous eye, and it became the pet hobby with those most actively concerned. However life or practice might wag for the rest of the month, the two evenings set

aside for the meetings were almost religiously observed. Indeed, so solicitous was the feeling on these occasions, that the arrival of each member was hailed with satisfaction, and the tardy few had inscribed against their names the monitory word "late," being thus penalized by disapprobation. The ethics of the profession were emblazoned on each member's shield and, however much one might sin in other things, disloyalty and offense against the Academy was not readily forgiven or forgotten. As an illustration, I well recall the castigation which a visitor once received for permitting a production which he gave by invitation before the society, to appear next morning in the daily newspaper. At the meeting following, one of the triumvirs arose with blazing eyes and, shaking a copy of the Times before a startled and awe-struck audience, with articulation almost inhibited by anger, said: "It is not customary for members of the Academy to use the society as a means of advertising themselves, and it seems a breach of courtesy on the part of a stranger who had accepted the hospitality of the society to do such a thing."

The culprit, who was present, excused himself on the plea of ignorance, stating that "The press had always eagerly sought anything from his pen, and he had heretofore found no objection raised to the gratifying of such desires, *pro bono publico*." Each member, I believe, took the matter quite personally, but after some discussion the offense was pardoned. The man, however, was rather generally avoided by the members from that time. "Some men make much noise during their lives" says Jules Simon, "and are unknown to posterity," and so this poor fellow, who afterwards died insane, was soon forgotten.

At the meetings timely, often local, subjects in medicine were taken up and discussed by nearly all present with more or less thoroughness, the limited number of those in attendance giving the younger members confidence; and they were always urged to express their individual observation. In looking over the minutes of these gatherings one is forcibly struck by the full and excellent reports of the discussions put down by the then secretary, Dr. Albert B. Lyons. The neatness of the chirography, the carefully chosen phraseology, and the thorough detail of the proceedings of each meeting present a model which might well be taken as a standard by all recording secretaries.

The years 1883 and 1884 mark an epoch in

the history of medicine; Klebs and Loeffler discovered the germ of diphtheria and made possible sometime later the development of Behring's antitoxine (1890). During the stabilizing of this remedy the Academy many times threshed out the sources and causation of the disease, but got no further than the general opinion of the profession at that time, that sewer gas and insanitation had much to do with its development.

The sporadic appearance of small pox likewise gave rise to much speculation, all of the members except one, the dermatologist, strongly advocating vaccination. "I cannot understand," declared the doubter, "how vaccination is supposed to modify variola so that a person who has been exposed to the latter disease may by vaccination escape,"—a sentiment which would rejoice the heart of a twentieth century anti-vaccinationist. In those days scientific discovery often percolated slowly to the various sections of the country outside of the great seaport towns. In 1885, six years after the discovery of the Neisserian organism, a slide of these bacteria was exhibited to the Academy, the first specimen of this microorganism to reach Detroit in this form, although unisolated and unstain-cocci of the same variety undoubtedly abounded throughout the city. In 1885, the Academy agreed to father a laboratory for physical research which some of the members had proposed starting; but it was with the distinct understanding that no money would be furnished. Dr. Henry Cleland offered a room rent free, but as the running of a laboratory requires financial support, and this was not forthcoming, the project never got beyond the purchase of a microtome.

This same year the pathological specimen of an extrauterine pregnancy was demonstrated, the first of the kind to be reported locally. The history of the case is interesting as showing that, although the patient had been examined by a number of leading physicians here, the condition had existed for some time unrecognized.

In an old sketch book I find drawings which I made from the specimen more than thirty years ago.

Such novelties as cocaine, then recently exploited, ruptured uterus, compressed air and artificial respiration in diphtheria, hysterical

testes, antiseptis, insanity and crime, hydrophobia and the like, were occasionally introduced for discussion, and broke the routine of more commonplace offerings.

On the whole, the meetings were conducted in a spirit of earnest helpfulness and form an epitome of the trend of medical thought and treatment of the day.

For some time prior to 1891, storm clouds appear to have been slowly heaping up ominous cumuli in an otherwise clear and cerulean sky, and the rumblings of distant thunder were discernable to those who had an ear to the ground. To the initiated was conveyed the feeling that the supposedly unimpregnable trenches of the Academy were to be stormed, and that the control of the society was threatened by a known force which was likely to put up a winning fight. As the election of officers was imminent, alarm and consternation filled the souls of the leaders, and quickly spread to the loyal cohorts. In order to forestall the possibility of nefarious action on the part of the enemy, a secret caucus of the chosen few was held at the office of Dr. Cleland, and a slate was made up and ratified by all of those present. At the next meeting I found myself overwhelmingly elected to the presidency, and was then credited with being the savior of the Academy, a tradition which was handed down to succeeding years. Whatever rock there may have been upon which a split in the society seemed inevitable, I cannot now recall, but my own opinion has always been that the danger was greatly exaggerated, for the votes cast at that election indicated that the opposing forces were quite unorganized and had no definite plan of action.

From this time on the Academy moved serenely and progressively forward; hardly a ripple has formed to mar the placid surface of its doings, and, while personal opinions have sometimes sharply clashed in open debate, the brotherhood of its members has continued undisturbed.

From the few of us of earlier days who still remain to actively enjoy and profit by the friendly and, sometimes, scientific, transactions of this body, goes up the fervent prayer; "That what will come, and must come, shall come well," in the future of the Detroit Academy of Medicine.

December 9, 1919.

THE VALUE OF THE OPHTHALMO-
SCOPE IN THE DIAGNOSIS AND
PROGNOSIS OF SYSTEMIC
DISEASE, WITH ILLUSTRATIVE CASE
HISTORIES.*

D. E. GODWIN, M.D.
HOUGHTON, MICH.

In the efforts of the diagnostician to acquire definite information as to the physiological and pathological processes in his patient upon which to base his conclusions, any method that is objective and therefore free from the inaccuracies of the patient's observations and statements, appeals to him as being of immense practical value. From the days of the ancient doctor who announced with marvelous precision the exact condition of the patient's liver by looking in his mouth, from the classical case of Alexis St. Martin studied so painstakingly by Beaumont, to the present day of highly perfected instruments for bronchoscopy, cystoscopy and fluoroscopy, the effort has been to obtain methods of learning visually what is going on in the patient's system.

Examination of the fundus of the eye offers certain distinctive advantages to that of any other method of internal inspection that makes it of peculiar value, not only in the determination of the condition of the eye itself, but in many cases of the processes of the whole system. Nowhere else in the body may a functioning nerve be seen in its undisturbed relation; and the fact that nerve and vessels are seen with remarkable distinctness, magnified to fourteen diameters by the mere application of a source of illumination thru a natural opening, makes the method easy of application, especially with the aid of the modern electric ophthalmoscope.

Embryologically, the optic nerve is not a nerve at all, but the nerve and posterior portion of the eye are an outpouching of the primitive brain, so that in looking at the retina, one is in reality looking directly at brain tissue, and the condition of the retina may often give remarkable insight into the condition of the brain itself. It is possible to observe in the retina and choroid the early stages of a pathological process that will later give manifestations in the cerebrum or in the general system. Also it is true that the onset of some systemic diseases is so insidious, and the symptoms so little marked, that the patient does not seek medical

aid until he becomes alarmed by an affection of the eye that he fears may lead to blindness. Every ophthalmologist has the opportunity of diagnosing such cases and rendering the patient a service by referring him to his physician with the advice that what he thought was a purely ocular affection is the evidence of a systemic disease, and may demand prompt treatment. On the other hand, many a case that is under medical care for some systemic disease, with diagnosis clearly made, may receive information of a prognostic value by a study of the fundus with the ophthalmoscope.

The following case histories have been selected from the writer's files as being somewhat typical of the conditions they are chosen to illustrate.

Case 1. J. M., male, age 34, Finnish farmer, seen Apr. 29, 1919. Came for examination of the eyes with the complaint of a supraorbital headache every morning for the past two months, and gradual diminution of vision for the past month. The vision was reduced to about 6-30 in the better eye, the other being somewhat worse. On ophthalmoscopic examination, choked disks of three diopters were seen in each eye, with numerous spots of retinal hemorrhage. The type of headache, being worse in the morning, and worse on stooping over, suggested nasal sinus infection, and a nasal examination showed polyphoid tissue in both middle turbinate regions. Transillumination and roentgen-ray examination both showed shadows in this locality. The urine showed about 1-8 volume albumin with the heat of nitric test, with granular casts and free red blood cells. There was no edema of the ankles or elsewhere. Diagnosis—Albuminuric retinitis from a nephritis possibly related to the ethmoidal disease.

Prognosis.—The man will probably die within two or three years, regardless of treatment.

Case 2. Mrs. J. F., age 39, seen Aug. 2, 1917, referred by a physician in an adjoining county for refraction. She was confined four weeks previously. Two weeks before confinement her vision failed rather suddenly. Her physician stated that she had some kidney trouble at the time of confinement, but that it was better at the time of this examination. Vision was 6-30 in the better eye. Fundus examination showed white spots stellately arranged about the maculae, spots of retinal edema near the disks, and one spot of retinal hemorrhage. Diagnosis—Albuminuric retinitis following pregnancy.

Prognosis.—Good for recovery from the renal disease, fair for recovery of vision.

Albuminuric retinitis occurs in by no means a large percentage of cases of nephritis. Its frequency is as follows: 1. The small contracted kidney, 2. chronic diffuse parenchymatous nephritis, 3. nephritis of scarlatina and pregnancy, and 4. (rarely) in amyloid degeneration

*Read before the Houghton County Medical Society, July 7th, 1919.

of the kidney. The prognosis is good in the scarlatinal and pregnancy cases, but in all the rest is bad, as statistics show that 90 per cent. die within two or three years. Most authors agree that an abortion is justified in a case of albuminuric retinitis of pregnancy with marked loss of vision, especially where some vision has already been lost in a previous pregnancy. The similarity of the involvement of the retina and the kidneys in Bright's disease is explained by the conception that the underlying factor in this disease is not the kidney affection but the high arterial tension, with resulting vascular changes, producing disorders in various parts of the body. The organs supplied by end arteries, as the kidneys, retina, brain and heart, are peculiarly susceptible.

Case 3. W. B. male, age 72, seen Dec. 27, 1918. Came for change of glasses with the complaint that the left eye had been getting weak in the past few days. Vision in the right eye with correction was 6-7.5, in the left was limited to the counting of fingers at two meters. The right fundus showed no gross changes, the left showed edema and small hemorrhages near the disk, with arterio-sclerotic areas in the choroid. Diagnosis—Arterio-sclerosis. He was referred for physical examination and treatment to his family physician who reported the urine negative, systolic blood pressure 190.

The typical changes seen in the fundus in arterio-sclerosis are: 1. corkscrew appearance of arterial twigs, 2. a flattening of the veins where they cross the arteries, 3. edema about the optic disk, 4. white streaks bordering the arteries and veins, and, 5. sclerosis of the choroidal vessels. With reference to the white streaks bordering the arteries and veins, it may be stated that the so-called blood vessels as seen with the ophthalmoscope are in reality the blood streams. The vessel walls are transparent, and only become visible pathologically, as in arterio-sclerosis. The occurrence of hemorrhages in an arterio-sclerotic fundus, as in the above case, is of bad prognostic import, as it is very often a forerunner of a similar process in the brain, and the patient will probably succumb of cerebral apoplexy.

Case 4. A. S. male, age 53, seen May 2, 1919. Came for refraction of the eyes. He had influenza, followed by pneumonia three months before, and since that time vision had been badly blurred. On examination, vision was limited to the counting of fingers at five and six meters in the right and left eyes, respectively. The fundi showed scattered white spots near the maculae and a few small spots of hemorrhage. The appearance suggested the retinitis of albuminuria or diabetes, but was typical of neither. Urine

examination gave a negative test for albumine, but a very marked reduction with Fehling's test.

Diagnosis.—Diabetic retinitis.

Prognosis.—Based on the presence of hemorrhages, poor.

On referring him to his family physician for treatment, it was stated that at the time of the pneumonia, the diagnosis of "cavities in the lung" had been made, and the patient had expectorated quantities of the most putrid material, in which tubercle bacilli had been demonstrated. As a tubercular infection in a gangrenous process in the lungs may complicate diabetes, it is possible that the diabetes had been the underlying condition.

Case 5. Mrs. M. R., age 43, seen Sept. 17, 1918. Came for refraction, complaining of poor vision in the left eye for the past six months. Vision in the right eye, with correction was normal, vision in the left with the best correction was 6-15 minus, and then only on indirect fixation, indicating a central scotoma. The right fundus was normal, the left showed several white spots in the retina near the macula. The urine was negative for albumin and sugar. There was no specific history, but the patient was married eighteen years before the first child was born. This child is now aged six and healthy. Diagnosis—Retinitis, probably specific. She was referred to her family physician for a Wasserman, but on account of the extreme nervousness of the patient and other difficulties, the specimen could not be obtained. The husband, however, admitted a specific treatment. Recently, the diagnosis of aneurism of the aorta, probably specific, has been made.

Case 6. O. V., male, age 32, seen July 16, 1917. Came for refraction with the complaint of poor vision for several months. Vision in the right eye was 6-20, and in the left was 6-30, and could not be improved with lenses. The fundi were normal except for a pale color of the optic disks, with liminae cribrosae plainly seen. Diagnosis—Beginning optic atrophy. He was referred to a local physician for a Wasserman. This was reported negative by the State Laboratory. Later a spinal fluid Wasserman was obtained and reported four plus by the same laboratory. The vision became progressively worse and the optic risks became whiter on subsequent examination. The condition is hopeless, and will not respond to any known treatment. The patient is by this time probably totally blind, and will probably develop other symptoms of Tabes Dorsalis, which is often ushered in by an optic atrophy.

The ocular symptoms of syphilis are varied. In the secondary stage, there may be opacities in the vitreous, edema of the nerve head, retinal deposits, white spots of exudation about the vessels in the periphery, and later chorio-retinitis with atrophic spots and pigment formation. There may be an optic neuritis followed by a secondary optic atrophy, or there may be a primary optic atrophy. Hereditary syphilis may be shown by the so called pepper and salt

fundus—scattered punctate atrophic areas containing minute spots of pigment.

Case 7. M. P., age 5, seen in consultation, May 23, 1919. The patient had been confined to bed for about a week following a mild attack of bronchitis, and was then in a stuporous condition with high temperature, loss of sphincter control and with a positive Kernig's sign. The physician in charge had diagnosed meningitis, probably tubercular. The laboratory tests on the spinal fluid had been negative. The ophthalmoscopic examination confirmed the above diagnosis positively, by revealing a tubercle in the choroid, the fundi being otherwise negative. The child died about three days later.

Tubercles in the choroid may be demonstrated in from fifteen to seventy per cent of cases of tuberculosis meningitis, also in a large percentage of cases of acute military tuberculosis, and this finding may sometimes be of value in distinguishing between this condition and typhoid.

Case 8. F. L., male, age 26, seen Dec. 22, 1916. Previous history negative. He complained of headache in the left parietal region for two weeks previously, followed by blurred vision in the left eye, gradually increasing to blindness. On examination, vision in the right eye with correction was 6-7.5 minus. In the left eye there was no perception of light. The right fundus was negative, the left showed a choked disk of three diopters, slight contraction of the arteries and dilatation of the veins. The urine was negative. The nose was negative at the first examination, but later a polyp the size of the little finger tip presented from behind the lower border of the left middle turbinate bone, showing an active process in the ethmoid. While under observation, the edema of the nerve head subsided and the disk became white, while perception of light upward and outward was regained. Diagnosis—Optic neuritis and atrophy secondary to ethmoidal infection.

The opportunities for optic nerve and fundus changes from nasal sinus infection are many, due to the close relation anatomically. The optic nerve may be widely separated by dense bone from the sphenoidal sinus or a posterior ethmoidal cell, or it may be contiguous to, or even lie exposed in one of these cells, or the optic nerve of one side may be in relation with an enlarged sphenoid sinus of the other side.

Case 9. Mrs. W. H., age 38, seen June 17, 1919. Has had five children, of whom four are living and well, and has had seventeen abortions. She has been having headaches with vomiting for the past two years. The vision has been failing during this period, but a week previously she could still see to read large print. In the previous two days, however, the vision became very poor so that she could not see to get around

alone. She had had several fainting spells in the previous two weeks. On examination, vision in the right eye was limited to hand movements, in the left eye it was 6-12 minus and limited to the left half of the field only. The fundi showed choked disks, dilated veins, and a few white spots near the macula in the right eye. The urine, nose, throat and teeth were negative. She was referred to her family physician for a Wasserman, which was reported as two plus. Diagnosis—The symptoms and findings suggest a tumor of the brain; the positive Wasserman makes it probable that it is a gumma.

Choked disks are a frequent, and often the first, sign of a neoplasm of the brain, and are found in a large proportion of tumors of the cerebral cortex and almost always in tumors of the cerebellum, optic thalamus and ventricles, but seldom in tumors of the pons or the deep portions of the cerebral hemispheres. The absence of choked disk in a suspected case is of no diagnostic value, but its presence is significant. The choked disk is usually present in both eyes regardless of which side the tumor is located, and most authors agree that the tumor cannot be lateralized by the difference in development of the ocular condition on the two sides.

Other nervous affections may give ophthalmoscopic manifestations. The chief of these is disseminated sclerosis, which is accompanied by optic atrophy in fifty per cent. of the cases.

In conclusion, it may be stated that, while the ophthalmoscopic examination of the fundus oculi may seldom, unaided by other methods of examination, give an indisputable diagnosis, it often leads the way where the necessity for a diagnosis had not been apparent before; that, especially in Bright's disease, arteriosclerosis, diabetes, brain tumors, brain syphilis and tabes dorsalis it may give the first information leading to the recognition of the pathological process, and that in the first three of these it may offer data of a definite prognostic value.

THE IMPORTANCE OF PHYSICAL FINDINGS IN LATE SYPHILIS. CASE REPORT.

ALBERT M. CRANCE, M.D.

First Assistant in the Department of Diagnosis, Jones Clinic.
BAY CITY, MICH.

CASE No. A-430. An American, male telegrapher, aged 37, entered with a complaint of "pain in the stomach when walking."

Family History.—Negative as to similar conditions, carcinoma or tuberculosis. He had been married nine years. His wife had had no pregnancies.

His former health had been good. He had had no operations or injuries.

Previous Diseases.—Seventeen years ago he had a gonorrheal infection together with a sore on the penis. He was treated with internal medicine by a physician. Otherwise the past history is negative.

Habits.—Coffee 1 cup, tea 2 cups, tobacco moderately.

Present Illness.—For six weeks symptoms referable to the stomach have been present. Some "stomach tablets" which were prescribed had given only temporary relief. The characteristic feature of the symptomatology is the presence of pain on walking, relieved only when sitting or lying. Unlike ulcer cases there was no relief nor aggravation from taking food. There was no history of chills, fever, nausea, vomiting, anorexia or loss of weight. The patient's bowels had been regular until two months ago, but had since been constipated.

Physical Examination.—Expression: Anxious and distressed.

Scalp: There was a slight degree of seborrheic dermatitis present.

Eyes: A slight external strabismus could be detected. There was a perceptible inequality of the pupils.

Teeth: There were present a second degree of pyorrhea, several fillings and crowns. The dental X-ray showed the upper left first molar and the lower right first bicuspid to be abscessed.

Tonsils: The tonsils were medium in size. A slight chronic pharyngitis was present.

Chest: The lungs presented a few râles on the upper right side. The heart sounds were normal; the pulse was 80; with a systolic blood pressure of 120, and a diastolic blood pressure of 80.

Abdomen: Negative except that some tenderness could be elicited in the umbilical region.

The patellar reflexes were exaggerated, especially on the left side.

Penis: There was a small, round, slightly depressed cicatrix on the glans.

The resumé on the day of examination was set down as follows: "Suggestive of lues III; await return of Wassermann.

The Wassermann was negative.

Further Tests: X-ray of the chest showed two healed lesions in the right lung, probably tuberculosis. It also revealed a high diaphragm on both sides.

Analysis of the gastric contents at fifteen minute intervals after the first forty-five minutes gave the following readings:

	Free HCl.	Combined Acids
1st	21	39
2nd	22	46
3rd	33	54

Lactic acid absent. Bile present.

Fleuroscopy showed that the six-hour meal was in the caecum. The stomach and duodenum were negative as far as could be told by the fleuroscope. The plates, however, showed a lesion of the antrum of the stomach, suggesting lues or carcinoma.

The urine was negative except for the presence of a small amount of albumin.

The hemoglobin was normal.

After a thorough reconsideration of the case, an injection of salvarsan was given. One week later a provocative Wassermann was taken and the report returned: Acetone insoluble antigen positive ++

Cholesterinized antigen positive +++

This confirmed the diagnosis of syphilis. Treatment is being continued. The symptoms referable to the stomach have already disappeared. The general appearance of the patient is considerably improved. The patient is undergoing rigid dental prophylactic treatment and also has had the abscessed teeth extracted.

DISCUSSION.

I chose this case in particular to bring out a few reasons why physical findings are of great importance in the recognition of late syphilis. First of all, thoroughness in examination must be emphasized. In this case we may briefly sum up the outstanding points of interest which at once suggest syphilis, viz., the unequal pupils, their sluggish reaction to light, and the slight external strabismus.

Another point of interest in the examination is the exaggerated patellar reflexes. The exaggeration is more marked on the left side. This, together with the dilated left pupil, which denotes paralysis of the parasympathetic nerve supply to the pupil, may possibly be a sign to bear in mind in such a type of case. The chronically inflamed throat is worthy of notation also.

The third point of interest, here, lies in the history. The outstanding point in this patient's history dates back to a venereal lesion 17 years ago. He was treated with internal medicine. We should also bear in mind that even though it probably was a chancre, there was no medicine 17 years ago, nor is there today, which given by mouth would completely cure syphilis.

Furthermore, chancroids are rare things and should be considered in any history as a very suspicious sign of syphilis until it is otherwise proven. Even the reports of a negative Wassermann on either blood or spinal fluid should not too strongly eliminate the possibility of the presence of the disease. A very important test in just this sort of case is the provocative Wassermann. One week after the first injection of salvarsan the blood will frequently, as it did in this case, bring out a positive test. It is surprising, however, that such a large number of cases of syphilis go unrecognized, simply because if the Wassermann returns negative it is taken for granted that the patient has not syphilis. No doubtful case should escape the provocative test. Personally, I believe it is of as much value as the spinal fluid Wassermann.

CONCLUSION.

This case exhibits a few points of interest well worth bearing in mind. First, that in any case with a history of a venereal lesion, syphilis is to be ruled out with caution before a diagnosis is made. Secondly, the importance of careful and complete, detailed examination, together with the ability to pick out the outstanding points which have considerable bearing in the case, can not be too strongly emphasized. There are too many cases of just this type still going along unrecognized and the main reason in each instance can be traced back to an incomplete examination.

GUN SHOT WOUND OF THE BLADDER.

B. H. VAN LEUVEN, M.D.

PETOSKEY, MICH.

Patient, W. T. of Bellaire, Mich., age 17 years. On Feb. 14, 1918, on trying to kill a dog he had wounded, used the butt of the gun as a club. The gun was discharged, sending a thirty-two caliber bullet through several layers of clothing, through the right ramus of pubis, through the bladder antero posteriorly one centimeter to the right of mid line.

The boy walked to the house about five rods and then discovered that the tip of the little finger and palm of hand were bleeding, and thought that the bullet which had passed through tip of little finger and under side of

palm of hand had missed him otherwise. The hand was dressed and the boy complained of being faint; on further examination the wound in the pubis was discovered. Up to this time he had experienced no pain other than that in his hand. Dr. Heubner of Bellaire was called, who advised sending the patient to the hospital.

On account of heavy snow the trains were stalled and it was twenty hours before he entered the hospital, during which time he passed urine and evacuated his bowels several times without much difficulty. He noticed the urine was slightly bloody.

He entered the hospital on a cot and was taken to the operating room for examination. Pulse 120; Temp. 96.5. No pain, complained only of being tired from the ride on the train. The only evidence of injury was wound in hand



and small round wound slightly to the right of symphysis pubis. Patient was taken to X-ray room and the accompanying radiograph taken. Bullet appeared to be inside pelvis. No lateral view was taken which should have been done as subsequent events proved. The patient returned to bed and after consultation it was decided to wait twenty-four hours for developments. Next morning patient temp. 98.4; pulse, 130. Specimen urine was bloody, slight discharge of urine from wound; abdomen distended, slightly nauseated.

Decided to open the abdomen to see if intestines were injured, tho no blood had passed in stool, and digital examination of rectum was negative, the pulse rate and distended abdomen were suspicious.

Patient etherized and an incision made in the mid line, six centimeters in length from the wound margin upward.

On exposing the bladder, a hole was found about two cm. in diameter. On digital examination of bladder, a piece of bone, size of a dime and several shreds of clothing were found and removed. A hole about one cm. in diameter was found in the posterior wall of bladder, slightly to the right of the anterior opening. No bullet could be felt. Abdomen opened, rectum examined, but nothing found except several dark red spots on loops of intestines that were low in the pelvis. No evidence of bullet on palpation against sacrum and structures posterior to rectum. Abdomen closed. Bladder closed with one-half inch drain tube sewed into anterior bladder wound, catheter placed in urethra. Patient returned to bed in fair condition. Saline per rectum. Bladder irrigated daily through tubes.

On the 21st, patient complained of pain in left buttock; on palpation a lump was felt and under cocaine the bullet was removed from the fascia of the gluteus maximus at practically the same horizontal plane as it entered the pubis.

In a week the patient developed temp. 101, and discharged large quantities of pus through both tube and catheter. Abdominal wound healed nicely, no complications. Bladder irrigated

B. I. D. Developed otitis media that yielded readily to treatment though the temperature went to 104, and pulse to 150. Whether this temperature was due to the ear condition or to an urethral abscess the size of a walnut that developed, I cannot say. This was treated locally with 15 per cent. argerol.

On March 3, patient sat up in chair; temperature 99, appetite good, apparently out of all danger.

On March 13, the pulse went to 150, very thready in quality, respiration sighing. Patient looked very much "washed out." The abdomen was distended, and fresh blood welled up through the super-pubic wound which had been kept open for drainage. In twenty-four hours, a good cup full of clotted blood was removed from bladder. Patient was receiving saline per rectum: Strychnine grs. q. 1-30 every four hours; morphine 1-4 grs. every four hours; and 20 cc. horse serum in one dose. Hemorrhages ceased:

Patient made uneventful recovery from that time on and was discharged able to void his urine and to retain about eight ounces. Patient reports that he is able to do heavy farm work, and feels as well as ever.

INTRAMEDULLARY BEEF-BONE SPLINTS IN FRACTURES OF LONG BONES.

EDWIN W. RYERSON, M.D., Maj., M.C., U. S. Army, Chicago.

(The Journal of the Amer. Med. Ass., Vol. 73, no. 18., Nov. 1, 1919.)

In fresh fractures and in reasonably young persons, heterogenous bone pegs may be used with safety and with the assurance that bone growth will not be inhibited. Beef-bone and ivory nails, screws, and intramedullary grafts have been used by a small number of operators.

Beef-bone splints of various sizes are cut out from the long bones of the slaughtered cattle. It is possible to procure from a butcher's shop pieces of the tibia or femur 5 or 6 inches long, and these are split with a saw into suitable sizes. They are then turned in a lathe or filed with a wood-worker's rasp or run thru a dowel cutter so as to be round or nearly round. Those for use in the femur should be about 5 inches long by three-fourths inch wide, for adults, and several smaller sizes should be ready in case the medullary canal should be unusually small, or for use in children. Splints for the humerus should be three-eighths inch wide, and those for the radius and ulna, one-fourth to five-sixteenths, and three inches long. The ends of the splint are rounded off, and a hole is bored thru near one end like the eye of a needle. These splints are then sterilized by fractional sterilization, and kept in containers. When it is desired to use them, they are boiled with the instruments.

The fracture is exposed with as little removal of periosteum as possible. The beef-bone splint is pushed into the longer fragment until it is completely within the bone, a long piece of heavy chromic catgut having been previously threaded into the eye of the splint. This double thread hangs out from the end of the bones. An eight-inch drill is now used to bore a hole in the other fragment, distant from the fracture about half the length of the splint. The hole slants a little toward the fracture end. A piece of wire, bent at the middle to form a sort of probe, is now passed into the hole and out thru the fractured end of the bone. The two ends of the catgut cord are then threaded into the wire probe, and the wire is pulled back thru the hole, bringing the catgut with it. The over-riding ends of the fracture are now reduced, either in a Murphy bone skid or by leverage or traction, the catgut cords being tightened at the same time so they will not become caught or pinched. When the bones are in position, the catgut cords are pulled on, and the splint will glide half way from one fragment into the other, so that it will be at exactly the proper point.

The catgut can be threaded into a needle, and sewed into the periosteum or muscle at its point of exit, which will secure the splint so that it will not slide out of position up or down the medullary canal.

Such a splint cannot fit the canal very tightly and it is not necessary that it should, provided that it is prevented from sliding out of place, and this is accomplished by the catgut. L. C. Donnelly.

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January

Editorials

ANNUAL MEETING OF THE COUNCIL.

The Annual Meeting of the Council of the Michigan State Medical Society will be held on January 13th at 6:30 P. M., and on January 14th, 1920, at 9:30 A. M. in the Wayne County Medical Society Building, Detroit, for the transaction of regular business and such other business as may properly come before this body. The reports of officers for the year 1919 will be rendered at the first session, on the evening of the 13th.

W. J. KAY, Chairman.

FRED'K C. WARNSHUIS, Secretary.

FEE SCHEDULE.

In this day of increasing cost of almost every commodity and with promise of no abatement, the problem of increased income is of vital concern to every member of the profession. In as much as our professional services is the source of our livelihood it follows that to meet increasing expenses we must naturally resort to the one recourse open to forestall financial embarrassment and increase the rates of the fees we

charge. A number of county societies have adopted new fee schedules. The question of the legality of such fee schedules has been placed before us. We have passed the question along to Mr. Barbour who is associated with the firm of attorneys employed by our Medico-Legal Committee. His opinion is published in full for the benefit and guidance of our members.

Detroit, Nov. 21, 1919.

Dr. F. C. Warnshuis, M. S. M. S.

Powers Theatre Building,
Grand Rapids, Mich.

IN RE. FEE SCHEDULES.

Dear Sir:

The question as to the legality of county Medical Societies adopting fee schedules has not been passed upon by the courts in this State. That such a schedule would not be a violation of the Sherman Act seems evident from the fact that proposed agreement has nothing to do with trade or commerce, nor with the restraint of trade or commerce as does the Sherman Act.

The answer to the questions involved does, however, necessitate the construing and interpretation of several of our State statutes. Section 15013 of the Compiled Laws of 1915 being Act 255 of the Public Acts of 1899, is entitled as follows:

"An Act to prevent trusts, monopolies and combinations of capital, skill or arts; to create or carry out restriction in trade or commerce; to limit or reduce the production, or increase or reduce the price, of merchandise or any commodity; to prevent completion in manufacturing, making, transportation, sale or purchase of merchandise, produce or any commodity; to fix at any standard or figure, whereby its price to the public or consumer shall be in any manner controlled or established, any article or commodity of merchandise, produce or commerce intended for sale, barter, use or consumption."

We wish to draw attention to the fact that the act is

"To prevent trusts, monopolies and combinations of capital, skill or arts, to create or carry out restriction in trade or commerce."

The body of the statute provides as follows:

"That a trust is a combination of capital, skill or arts by two or more persons, firms, partnerships, corporations or association of persons, or of any two or more of them, for either, any or all of the following purposes:

1. To create or carry out restrictions in trade or commerce.
2. To limit or reduce the production, or increase or reduce the price of merchandise or any commodity.
3. To prevent competition in manufacturing, making, transportation, sale or purchase of merchandise, produce or any commodity:
4. To fix any standard or figure, whereby its

price to the public or consumer shall be in any manner controlled or established, any article or commodity of merchandise, produce or commerce intended for sale, barter, use or consumption in this State;

5. It shall hereafter be unlawful for two or more persons, firms, partnerships, corporations or association of persons, or of any two or more of them, to make or enter into or execute or carry out any contracts, obligations or agreements of any kind or description, by which they shall bind or have bound themselves not to sell, dispose of or transport any article or any commodity or any article or trade, use, merchandise, commerce or consumption below a common standard figure or fixed value, or by which they shall agree in any manner to keep the price of such article, commodity or transportation at a fixed or graduated figure, or by which they shall in any manner establish or settle the price of any article, commodity or transportation between them or themselves and others, so as to directly or indirectly preclude a free and unrestricted competition among themselves, or any purchasers or consumers, in the sale or transportation of any such article or commodity, or by which they shall agree to pool, combine or directly or indirectly unite any interests that they may have connected with the sale or transportation of any article or commodity, that its price might in any manner be affected. Every such trust as is defined herein is declared to be unlawful, against public policy and void."

We do not think that the proposed fee schedule would involve sub-sections 1, 2 or 3, as it is obvious that personal services cannot be considered trade, commerce, merchandise or a commodity. Sections 4 and 5 however deal more directly with the regulation of price of commodities or merchandise intended for sale or barter within the State.

It is our opinion that the above statute would not be interpreted to include personal service if the question were squarely presented to the Supreme Court.

The question as to the standing of personal service with reference to statutes similar to the one involved in this State, has been taken up in a small number of cases, and our opinion is based on the general rule as determined from these cases.

The right of laboring men to combine for the purpose of regulating their wages has never been seriously questioned, and it seems logical that a law applicable to men who work with their hands should, when no other principle of public policy controvenes, be equally applicable when the general purpose to be accomplished is the same to men whose work is more intellectual—in the instant case, physicians and surgeons. In other words, if the combination for the purpose of regulating what one class of men in a community shall receive for their personal service is valid, because not within the scope of the anti-trust statutes, it cannot be that any combination for the same purpose is prohibited because of the

character or description of the individuals who enter into the combination. The basic element which determines whether or not the combination is legal or illegal is the purpose or end to be attained by the combination, irrespective of the character or description of the individuals who enter into the agreement.

That such is the rule in Michigan has already been determined with reference to laborers in the case of *Hunt Vs. Riverside Co-Operative Club*, 140 Michigan 538, where the Court at page 549 is discussing the right of laboring men to agree as to the prices for their services says:

"I think it is clear that prior to the enactment of the statute of 1899, courts had no authority at the instance of a representative of the people to enjoin the making of such agreements. They have now then no such authority unless such agreements are forbidden by that statute. If that statute forbids such agreements, it follows that it forbids all agreements fixing and regulating the price of labor, and that associations whether or employees or employers when endeavoring to fix and regulate the price of labor, are engaged in a criminal undertaking. In general it may be said that the statute forbids certain contracts and certain defined trusts. An agreement fixing and regulating the price of labor is not one of these contracts nor one of these trusts."

It would seem therefore, that inasmuch as this statute does not forbid agreements fixing the price of labor, that agreements fixing the price of personal service even of professional men would not be under the ban of the statute.

The decision in the *Hunt* case was rendered on June 29th, 1905, nine days following the going into effect of a statute declaratory and amendatory of the Act of 1899. We will discuss the effect of this last act in later paragraph.

The question of regulation of medical services by a fee schedule, was rendered in the case of *W. A. Rohlf Vs. Harry Kasemeier* and Iowa decisions reported in 118 North Western 276. The statute under which a number of doctors were indicted for entering into an agreement for the purpose of fixing, establishing and regulating the price of services rendered. The Michigan statute is probably a little broader than the Iowa statute due to the use of the words *skill* and *arts*. However, the general reasoning of the Iowa case will apply to the Michigan statute.

The Iowa court in deciding that the combination was not illegal, held "That labor is not a commodity within the meaning of the act now in question," citing in support of this conclusion *Hunt Vs. The Riverside Co-Operative Club*, 140 Michigan 538.

The Court also pointed out:

"It seems to be the almost universal holding that it is no crime for any number of persons, without an unlawful object in view, to associate themselves together and agree that they will not work or deal with certain classes of men who work under a certain price or without certain conditions * * * * that the prac-

tice of medicine and surgery is labor, no one, we think, will question."

As we have stated above the Act of 1899 was amended in June, 1905, by a declaratory and amendatory act, the first two sections of which are as follows:

"1. All agreements and contracts by which any person, co-partnership, or corporation promises or agreed not to engage in any avocation, employment, pursuit, trade, profession or business, whether reasonable or unreasonable, partial or general, limited or unlimited, are hereby declared to be against public policy and illegal and void.

2. All combinations of persons, co-partnerships or corporations made and entered into for the purpose and with the intent of establishing and maintaining or attempting to establish and maintain a monopoly of any trade, pursuit, avocation, profession or business, are hereby declared to be against public policy and illegal and void."

The Hunt case was decided subsequent to the going into effect of this statute, but its provisions were not considered in that decision. We do not think that the amendatory act would affect our opinion as given above, and furthermore we are of the impression that the contemplated agreement does not come within the statute, as it is not an attempt to establish and maintain a monopoly, but rather for the purpose of standardizing the fees to be charged.

We trust that the above will meet your requirements.

Very truly yours,
Douglas, Eaman, Barbour & Rogers.
By Herbert V. Barbour.

THE NEW YEAR.

We are off on a new year—just one more to add to each one's total and, incidentally, a new decade. Of course we want it to be happy and prosperous for each member and reader. For that reason we are speaking plainly and perhaps bluntly—nevertheless the imparting of true facts may awaken a new spirit and present a clearer understanding and thereby achieve a result that will create a new state of affairs, so that in the end added happiness and increased prosperity will be the net accomplishments—here is hoping so.

After a recent issue of the Journal we were accosted on several occasions with the query—"Why so pessimistic regarding the future of the profession?"—We admitted the correctness of thus sizing up our mental viewpoint and substantiated it by pointing out the trend of affairs, just as we have done in the pages during the past three or four issues. In fact, we haven't had much to be optimistic about. We

write personal letters to members, county officials, committees and obtain but few scattered replies. We write suggestions as to proposed plans of procedure or innovations and silence attends. We purposely pass out criticism anticipating we will secure a "rise" and so start an argument and possibly thus awaken some enthusiasm, and all that we get is a postal card telling us to change a mailing address, with an added postscript, "Rah, Rah, Journal." We suggest clinical meetings and extension work, hospital standardization, "Black Plague" control, military training, public health work, compulsory health insurance, etc., etc., and never a card or letter reaches our desk revealing that any of our members are interested in the slightest degree. We offer to give space for the discussion of present day problems, the needs of the profession, case reports, personal observations with a net result of one letter from the wife of a deceased member who has an office examining chair of the doctor's for sale. Can you blame us for being pessimistic and for wondering if we are dead? We know from what is going on in business and social circles, from the literature that comes to our desk, that a vital need exists for us all to be awake. Still the lethargic state appears to be so deep that to create an awakening only an avalanche of ton rocks will produce a "getting busy" frame of mind amongst our Michigan doctors.

Sure, we are all busy with our individual practices and we are going 18 hours or more a day to make the "coin," play the game, pull the wires and have cut out all avenues of communication with our "buddies." In doing so we think we are happy and fairly prosperous and maybe we are temporarily—but what a bump we will receive when we do get hit, as we surely will, if we do not forget a little more of self and commence to think and become interested in the welfare of our neighbors, and the profession as a whole.

We are in a reconstructive state of affairs in practically every avenue of the business, professional, political and social life. Things are being done differently, business is being run on different lines, social affairs are different, government is different and professionally, we have found things different and requiring different methods. The ways of yesterday are past and are not applicable to the problems of to-day. The lessons of yesterday are, however, capable of indicating the direction towards which we

must proceed and they reveal how we may avoid the pitfalls that are in the making.

This New Year must witness that change. The year will not record it unless we experience that awakening, unless we perceive that a collective activity and effort is essential. So we point out the need and outline what must be done—and in doing so we do not assume to be a Moses leading a tribe out of the wilderness. This is our recommendation:

- A. The securing as members, every eligible physician in the state. County societies to make this a special point and to put on a membership campaign with teams soliciting members.
- B. County Societies to hold regular meetings at not less than two week intervals—in certain localities monthly. Said meetings to have 100 per cent. attendance secured by definite missionary work and delegated duty to achieve the presence of every member at each stated meeting.
- C. Program Committees in each society which are charged with the responsibility of making each meeting worth attending. Said programs to cover other than purely scientific topics. Social and fraternal features not to be neglected.
- D. At least two Councillor District meetings during the year in each District.
- E. District Clinical meetings conducted by trained clinicians.
- F. Active, 100 per cent. support to our State Committee on Social and Industrial Relations and responding to the limit to every request that emanates from that Committee.
- G. The same support to our State Medical Legal committee.
- H. A personal interest in the *Journal* and its advertisers. Contribution of papers and case reports that contain scientific observations and practical application of modern accepted principles. Discussion of the problems and needs of the profession, in the columns of the *Journal*, by members from every section of the State. Patronage of our advertisers who make the *Journal* possible.
- I. An interest in our Annual Meeting and a large attendance at the Kalamazoo meeting. That meeting promises to be epoch making in our organization's history.
- J. The cultivation of a broader, truer and deeper spirit of fraternalism. Less con-

centration on the avarices of self and greater consideration for our fellow.

- K. The recognition of our obligations to the public in matters pertaining to Health Conservation, yet, still not unmindful of the fact we are not the tools of either capital or labor.
- L. Participation in the communal affairs of the vicinity in which you reside.
- M. A studious pursuit of the progress that is being made in scientific matters—a careful examination of each patient, a candor and honesty in treatment. Cut out the empirical, the heroic, the miraele, the riding of hobbies—be earnest, honest, conscientious practitioners.
- N. Be men in the sense in which men are required today. When we say men we mean "He-men" and not a substitute.

We recognize that the above exceeds the ten commandments that were set forth for the guidance of a certain people. Likewise numerically they resemble a certain "Fourteen Points" of international fame. In spite of such pseudo precedents we submit that these suggestions when pondered upon will indicate a direction of endeavor that will enable our members, singly and in union, to attain recognition that is merited, recognition that will maintain our status in the affairs of our age and insure a future wherein our interests are conserved. If we do not unite along these or similar activities, if we go on individually and heedlessly, we are in for troublesome times.

What are you going to do about it—Member, County Society, District Society? We are eager to record your 1920 resolution.

COMPULSORY INSURANCE.

Measures are being advocated and legislation projected which, if carried into effect, will revolutionize the practice of medicine and instead of being a profession, medicine will become ordinary business and barter and trade. Yet, I question if one per cent. of the medical profession of this country has anything but the haziest ideas of what Social or Compulsory Health Insurance will mean to him as a citizen, as a tax payer and as a medical man. Your Committee on Civic and Industrial Relation is thoroughly aroused to the importance of this question and the vital necessity of arousing the rank and file of the profession to its effect on

them and on the future practice of medicine. The Committee is not prepared at this time to say whether it is the very best thing for everybody in the world or the very worst. The Committee takes the position that every member of the profession is twenty-one years old and perfectly able to draw his own conclusions, if he will take the time to study the subject. The aim of the Committee, at this time, is to awaken every man to the fact that this is a matter in which he is vitally interested; that he is the one to decide whether the people of this country can best be served by the independent professional man to whom they are individual human beings or by the physician who is to rank as a hired man and who must of necessity consider them en masse, with all the lack of a hired man's responsibility. It is the physician who must decide whether it is better for all to have him the free individual worker or a clock puncher.

That this is not an exaggerated statement, we quote from the book "Standards of Health Insurance" written by Dr. I. N. Rubinow, Russian born, one of the experts and chief propagandists on Compulsory Medical Insurance.

Dr. Rubinow writes: "The established form of administering medical aid in this country (America) is through so-called 'private practice.' As a matter of fact, only a few professions have succeeded in preserving this system as a predominating one. While private practice for a fee is still the rule in medicine and law, elsewhere this has given way to the usual contract and the stipulated monthly or weekly remuneration. This is largely true of most forms of scientific and social investigation, *although private practice survives to a limited extent, especially in cases of leaders and experts who may serve in a consulting capacity.* Private practice gives way as one large employer, either individual or corporate takes the place of many petty ones. A definite wage contract is preferable, because it is more economical and more efficient. Medical aid among the poor is largely inefficient. It is administered almost exclusively by the so-called 'general practitioners' or 'family physicians' often jacks-of-all-trades whose persistence is out of harmony with the recent phenomenal development of scientific medicine. This is not at all a revolutionary proposal. It is found on a national scale in *the famous system of Russian village medicine.* In large industrial communities, the poetic 'Country Doctor' who took care of several generations has long since given way to the modern

commercialized practitioner. It is preposterous to imagine that the average working man or woman is able to pass upon the professional accomplishments of his physician. But because professional success depends much more upon the physician's reputation than upon his professional standing among his colleagues, the free choice of physician is often defended because it represents a valuable asset comparable to the "goodwill" of commercial, undertakings."

In this excerpt you have the opinion of the advocate of Compulsory Medical Insurance on the "general practitioner" as a jack-of-all-trades. He denies the right of choice of physician on the score that the patient is not competent to pass but must have the choice thrust on him. You will note that "private practice" so condemned is to survive only for the benefit of leaders and experts. You will note that Russia has a famous system of village medicine which we are asked to imitate. Having digested these points, read the book in its entirety, this committee would like to hear from members of the profession on this question. If a member is interested, we will gladly send him the very best arguments that we can find on both sides. We will welcome any information on the Russian Village methods of practicing medicine or the methods employed by the Modocs, if they seem to the physician better than those in vogue. This Committee wants to waken the members of this Society and every physician to the fact that a Revolution is on, that it is a conflict in which each and every man is vitally interested. As a citizen, the question of cost and taxes and the possibility of a tremendous political machine confronts him; as a physician, he is to be torn from his high estate as priest and healer and relegated to the arena of business. If that is what the profession wants, they can have it, but at least accept it with your eyes wide open. This Committee is seeking information from all sources. It is not seeking to foist opinions of its own on the members of this Society. It is a committee of nine men widely separated. To get together means a loss of time and money, and in many cases it works hardships. They are not high salaried experts with cost plus at their backs, if they leave home, but men whose very vacations mean work, study and advancement in their chosen work. The question, stripped of all uplift and service verbiage is "Shall medicine continue to be a profession or is it to become a poorly regulated business. This Committee urges the medical men of this state to

take up the question. Take it up individually and collectively, thresh out the arguments for and against. Take no man's dictum but give it the acid test of personal study. This Committee wants to hear from you. It wants information from you. It will send you information. It cannot be bigger than the Society it represents. Its work cannot be a success, unless it can interest every man engaged in the practice of medicine.

GEORGE E. FROTHINGHAM, M.D.

Chairman Committee Civic and Industrial Relation.

Detroit, December 7, 1919.

MEMBERSHIP IN THE STATE SOCIETY.

At least once a year every good business concern takes account of stock, reviews its affairs for the previous twelve months and studies the field to see where it may extend its activities for the betterment of its position.

The practice of medicine is both a profession and a business and it will pay us to take a look both backward and forward to determine whether we are advancing and if so whether at a satisfactory rate.

Membership in the State Society is one of the best criterions by which to judge the condition of the society, for membership grows only when the officers of the County and District societies are busy on the job.

Just before the annual meeting of the County Societies membership is at its high-water mark and tends to slip downwards after that by reason of the slow payment of dues by the slack-twisted and indifferent until the County and State officers get busy and prod them into paying up.

Owing to war conditions and the absence of men in the service our membership dropped last year from the high-water mark of 1917, which was 2,504, down to 2,291 at the time of the annual meeting last June.

Following that meeting the State officers and the Council started an active campaign with the result that on Dec. 1 our membership has reached two thousand five hundred and eighty-three, which is seventy-nine more than it has ever been before.

Considering that our total annual growth has not equaled a hundred, previously, it looks like a magnificent feat to have taken up the slack of over two hundred and added seventy-nine beside in the five months which have been spent on the job.

Evidently our Secretary's efficiency has not suffered by his army experience, for the work has been his, even if the officers do lay claim to some of the ideas which produced the results.

There is, however, another side to the picture. Early in the campaign a survey was made of the State to determine how many men were practicing medicine in the State who, though eligible, were outside the Society and should be within it.

Allowing for estimates and guesses we found approximately 3,000 eligible of whom close to 2,600 are now members.

Thus there are over four hundred good men in the State who are outside the Society and doubtless every one of you knows one or more of them.

The largest non-membership is not, as might be supposed, in the districts remote and hard to be reached, but is in the cities and in direct ratio to the population of each.

Thus Wayne County had close to 350 eligible non-members; Kent County, 84; Calhoun and Genessee, 42 each; Washtenaw, 39; Saginaw 24; Jackson, 10; Bay, 8.

Kalamazoo and Lansing had not reported at the time the table was compiled and men joining since that time will alter these totals a little.

A splendid example of what is "everybody's business is nobody's" is Detroit, which has two-thirds of the men who are on the outside looking in instead of on the inside plugging for the united profession.

We all know many good reasons for these facts, such as the shifting of location which has gone on so greatly in the last two years, and the slowness of the men themselves to make themselves known to their neighboring practitioners; but the County Societies should have social committees whose duty it would be to make the acquaintance of the new man and, if he was a decent sort, see that he became a member of the society at the earliest possible moment.

Nothing will make a man so good a local worker as to find he is wanted and that the men already on the job are not carrying a knife in their boots ready to stick him between the ribs the moment his back is turned.

Some significant facts were noted during the State canvass, the first being that whereas the directory of the A.M.A. credited Michigan with 4,598 physicians the number reported or estimated by the County Secretaries was 3,652, a discrepancy of 946. As the directory lists retired and out of practice men, together with

some dentists and pharmacists, it will be fairly close to the facts to credit 500 more than the Secretaries report making the total 4,150.

If this number of men are practicing medicine in Michigan and our total membership is 2,583 what about the other 1,567?

The County Secretaries reported 500 more eligible than our present membership; is it believable that there are over a thousand doctors in the State not fit to be members of our County and State Societies.

Is it not rather that our exclusive individualism makes us neglect to cultivate friendly relations with those men, and had we done so would we not find a majority were a good sort after all?

Men in every occupation in life are forming associations for mutual benefit, and even in the most highly competitive are finding the association beneficial. In a liberal profession like ours how much more is this true and we must be altruistic enough to ask the others to share what we on the inside know to be so beneficial.

Then let each of us who knows a man on the outside who should be in the Society, either for his good or our own, take pains to show him the benefits of membership, tell him of the good fellowship that exists, the professional standing it will give him and the uplift in his professional attainments. Tell him "it's a good thing, you can't afford to miss it."

C. H. BAKER.

ENDARTERITIS OBLITERANS.

A MEDICO LEGAL CASE.

In the heart of the lower end of the Michigan fruit belt, an old doctor has practised medicine for over forty years, assisted, during the past ten years or so, by his son. Through fat years and lean, wind and snow, sun and storm, heat and cold, these doctors have covered a large rural territory, giving public service for small returns. A community Edenlike in its simplicity where the doctor is always Doc and the patient always Sam or Susan is at last invaded by the serpent, in this case a clever attorney, and trouble has come thick and fast the past year for our two country doctors.

In the winter of 1915-16 a Chicago man working a farm for his brother-in-law began to have pain in the little toe of his left foot. This pain was paroxysmal in character, often running up the leg in sudden cramps, especial-

ly while walking, and so severe as to practically disable him. After some weeks he decided that a corn was causing his trouble and paid a modest fee of 25 cents to a neighbor who specializes in the application of a corn remover. The remedy was applied, a small callus dug out, but the pain continued and the wound did not heal. Some six weeks later, he went to see the elder doctor, who made a few stimulating and antiseptic applications to the ulcer, but the wound would not heal nor the pain abate. Then father and son examined the toe together, decided that some obscure *infection* accounted for the condition and that amputation of the toe would stop the pain and remove the ulcer. There was no apparent infection, just a little redness about the ulcer, and the amputation was made at the base with removal of head of metatarsal bone, the wound closed with three or four stitches, a dry dressing applied, with loose retentive bandage over it, looped a couple of times around the ankle. That the toe was *white* compared with the rest of the foot and toes and did not bleed at amputation, was a fact noted by the doctors but not deemed important. The severe pain continued, and, at his first visit, *three* days after operation, the young doctor lifted up the loose bandage to inspect the wound; but did not dress it. The temperature of half a degree was attributed to sluggish intestinal action. At the next visit, after a couple of days, the same symptoms were present and the same procedure followed. On the sixth or seventh day after operation, the dressings were removed, a little boggiess above the wound noted, so the stitches were removed and dressing renewed.

At the next dressing, or soon after, a little more swelling of foot appeared and the wound, which had only partly healed, was probed, but seemed clean; and a few days later, the swelling on foot was opened and drained, though only a little serum was found. The drainage wound was irrigated with various solutions including Dakin's, but the general condition of the foot was rapidly retrograding and the patient was taken to Chicago three weeks after amputation. There he was cared for by Dr. A. H. Fowler, family physician of the brother-in-law who owns the Allegan county farm, and in a few days the leg was taken off.

Suit was brought in this case and came to trial in March, 1919. The plaintiff charged negligence, that the toe was infected, hence the amputation wound should have been drain-

ed and not closed, that hot boric acid dressings should have been used instead of dry dressings, that more frequent visits and removal of bandages were indicated from the start, and that had the toe and foot been properly treated from the time of amputation the leg would have been saved. This contention was maintained by the plaintiff and his relatives and supported by a deposition from Dr. Fowler and the presence and testimony of a doctor from Chicago named Stephen W. Cox. Dr. Fowler said that he found the amputation wound not completely healed, the drainage wound on dorsum of foot without discharge, the foot swollen and boggy, without circulation, gangrene beginning behind the amputated toe and red streaks running up the leg, that after two or three days trial of hot wet dressings he called Dr. Allen H. Kanavel who sent the man to the Hospital and took off his leg, that he was present at the operation, and that Dr. Kanavel first cut in above the ankle, then below the knee, but got no bleeding, then amputated at middle of thigh and got above the arterial obstruction. He also said that this condition found at operation was the direct result of infection beginning in the foot, which drainage and wet dressings would have checked. Dr. Cox said that he had practiced in Chicago for thirty years, connected with various hospitals and more recently in charge of a large private hospital of his own (five or six beds), had done lots of surgery of all types, much court testimony for both sides but recently only as the plaintiff's witness, had personally cared for over 50,000 patients in the past seven years, and from his extensive experience had no hesitation in admitting that had these two Michigan doctors treated the case properly, with drainage and wet dressings, the man would not have lost his leg. Exhibit A was the plaintiff on crutches.

The case for the defendants was not strong enough to win. The doctors had to admit that they did not understand the case, that they suspected *infection* but could find no evidence of it, and, although we had pointed out, when the suit was first reported, that the basic pathology was arterial obstruction antedating the first connection of the defendants with the case, this defense was not pounded in strongly enough to impress the jury who brought in a verdict of four thousand dollars damages. Every attempt to get information from Dr. Fowler had failed, hence we did not know until

shortly before the trial that Dr. Kanavel was the surgeon, and he was then in Europe. The experts for the defense were local physicians who quite well avoided the traps of the opposing attorneys on infection but were not strong in upholding a theory of which they had no practical knowledge, and neither our attorney nor our experts were convincing enough in explaining why the plaintiff lost his leg. The fight was waged over dry or wet dressings, and to drain or not to drain—barely touching the real fact that the pain in toe, etc., was positive evidence of arterial thrombosis and the loss of leg an inevitable sequel. There were some *legal* errors in the trial justifying appeal to the Supreme Court, and fortunately the judge granted a new trial which came in October.

I was so sure of the pathology from the early symptoms that I began studying the recent literature for similar cases, and thus was able to define the case as one of *Endarteritis Obliterans*, and began to build the defense around this term. Reference to recent literature, especially the work of Dr. Leo Buerger, were sent to the defendants, and their education thus begun elicited the new facts—that there never was a corn, that the toe was white (i. e. bloodless), and that no arteries bled when toe was amputated. After our attorney absorbed the pathology of this rare disease, he went to Chicago, and, guided by a carefully thought out line of questioning, secured a masterly deposition from Dr. Allen H. Kanavel who amputated the leg. Dr. Kanavel said the case was one of *Endarteritis Obliterans*—a rare disease—that he found the femoral and both tibials blocked by an intermittent thrombosis from point of amputation to ankle; that there was no infection of the artery or the thrombi, although there were some red streaks on lower leg; that disease had been months in developing; and that no treatment could have changed the end result.

At the trial the only new evidence presented by the plaintiff was the testimony of another Chicago medical expert named Alonzo C. Tenney, who is given in the A. M. A. Medical Directory as "Adjunct Professor of Theory and Practice of Medicine at Hahnemann Medical School and Hospital." He frankly admitted that any narrowness in his medical education had been eradicated by post-graduate study at schools like Harvard etc., that he was an expert of large clinical experience and rare diagnostic skill, that *Endarteritis Obliterans*

was common—he had treated twenty-five cases which he saw too late to benefit, but had cured at least 250 cases by attention to diet and proper medication, that the diagnosis was easy and even a country doctor should recognize it in his first few visits, that the plaintiff had a negative (blood) Wassermann, a normal blood pressure, no glycosuria, and was well to-day whereas, had he ever had *Endarteritis Obliterans*, he would have died ere this of some one of the end results of general Arterio Sclerosis, that the real condition was one of "*Ascending Arterial Thrombosis*" due to neglect of infection in the amputated toe, which started at that site and backed up to the middle of the thigh "Exactly, gentlemen of the Jury, as though you had a rubber tube filled with water and directed a freezing spray of liquid air against the lower end of the tube."

He was a very clever witness, with the sky as the limit, and is certainly "worthy of his hire." Dr. Stephen W. Cox found "a rough and rugged road to travel" this time. He said he practised in the country while living with or working for a doctor cousin before he began to study medicine and thus was qualified to criticise the treatment of country doctors in Michigan, that the modest number of 50,000 patients treated the past seven years as per his previous testimony was a misstatement—he meant in thirty years—that in this 50,000 cases he had seen no *Endarteritis Obliterans*—the symptoms of which he considered to be hardening of the arteries, hob nail liver, dizziness, etc.; but the classic symptoms of intermittent claudication—ischaemia and erythromelalgia—were unknown to him, and he concluded his performance by testifying that infection and inflammation were synonymous terms. The contrast between the statements of this pair was so marked as to set the jury guessing wherein lay the truth.

The defense took the symptoms as presented by the plaintiff: (1) long continued paroxysmal pain; (2) a small ulcer long unhealed; added by lay witnesses; (3) that there was no corn; (4) that the toe was white; and showed by the defendants that (5) there was no arterial bleeding when toe was amputated, and thus established the diagnosis of *Endarteritis Obliterans*, in conformity with the opinion of Dr. Kanavel, the one man who knew what disease the plaintiff had. The experts who testified for the defense were Dr. W. T. Dodge of Big Rapids, Dr. Arthur L. Robinson of Alle-

gan, and Dr. J. B. Kennedy of Detroit. The writer was present during three days of the trial understudying Yost as Director of Team Play and Strategy.

Dr. Dodge testified that he had practised for over thirty years, mostly as a surgeon, and was chief of Surgical Division at Camp Sherman for a year and had never seen a case of this type until he encountered one at Camp Sherman, that neither he nor twenty men under him recognized the character of the case, and that three amputations were made before getting above the obstruction. Dr. Robinson testified that since the previous trial he had seen his first case of this disease, and demonstrated to the Jury the pathological autopsy findings—the internal iliac being stenosed with thrombotic plugging. He also demonstrated the autopsy findings in a man who dropped dead the previous day, a beautiful specimen of calcareous and thrombotic obstruction of the coronary arteries with all other arteries normal. This man died, he said, of the same disease which the plaintiff had, died because it shut off the blood supply from the heart instead of the leg, that the attacks of pain common in *Angina Pectoris* were due to *intermittent claudication*, the same cry of the nerves for blood as caused the pain in the plaintiff's toe. He then showed by a chart illustrating the circulation of the blood the preposterous nature of the plaintiff's claim of *infective ascending arterial thrombosis* since the network of minute capillaries connecting the arterial and venous systems would not permit the passage of an embolus, however small, from the arterial into the venous system, nor from the venous system, through the lung capillaries into the heart, hence any embolism found in the arterial system must originate there and be carried by the blood stream from the point of origin to the more distant point where found; therefore the emboli found blocking the arteries of the plaintiff's leg originated there and were carried downwards from the point in the thigh where the inflammatory obstructive changes in the femoral artery were developing. Moreover, were this an infective process, the first effect of *infection* on blood clots is liquify them, thus making possible secondary hemorrhage, and that the effect of infection in the obstructed arteries found in the plaintiff would have been a rapid liquifaction of the clots, a breaking down of much tissue in quick abscess formation, and the re-establishing of the blood stream.

When Dr. Robinson concluded his direct testimony, the attorneys for the plaintiff had little left but to attack him personally as a witness who would swear to anything to protect a brother doctor. But the Jury knew he was telling the truth.

Dr. J. B. Kennedy concluded and completed our defense. He said that in over thirty years of large surgical practice he had seen but two cases of *Endarteritis Obliterans*, the early symptoms of which were those proven present in the case of the plaintiff, showed how the gradually developing obstruction of the artery produced all the symptoms previously testified to, for which amputation above the obstruction offered the only cure. He hammered home all the points made by Dr. Robinson in a positive, convincing way unshaken by cross examination.

The attorneys for the plaintiff were unable to counteract the effect produced by the deposition of Dr. Kanavel, upheld so definitely by all our experts, and the explosion of their absurd theory; hence they were in worse shape than the plaintiff himself, who had one leg left to stand on. Their experts had left town, the local profession stood solidly for the defense, and the attorneys were too ignorant of medicine to manufacture any medical comeback to the positive and convincing defense. Hence their address to the Jury consisted mostly of an attack on the State Medical Society and the "mysterious Dr. Tibbals," whom they credited with *framing up* the defense.

It took the Jury but a short time to bring in a verdict of "no cause for action." The writer is naturally elated, because this verdict rights a great wrong.

The "man of mystery" claims credit only for persistently maintaining that his diagnosis, made on receipt of first statement of facts, was correct, and that continued *driving* in of the actual, incurable nature of the case would convince any jury of reasonable intelligence that justice was with the defendants.

The writer desires to publicly extend his personal thanks to the experts for the defense and his compliments to the experts from "The Windy City" and to express the hope that they collected in advance.

Someone has said that there are three kinds of medical experts: doctors, liars, and damn liars. The experts for the defense were all in Class A.

FRANK BURR TIBBALS,
Chairman Medical Legal Committee.

Bristles.

GREETINGS: Except for the advent of a few more gray hairs, which make themselves known to us when we are vain enough to consult our mirror, it is hard for us to realize that another year has slipped by and closed another chapter in the book of time, while an additional slice has been taken off the comparatively short time that we are permitted to stalk this busy little planet upon which have either fortunately or unfortunately cast our lot, involuntarily.

When we glance back at the happenings of the past year, which has been called by some a reconstruction period following the close of four years of the maddest expenditure of lives and money known to mankind, we recall most vividly, perhaps, the Goliath-like steps that have been made in almost every line of endeavor in the battle for existence.

It is simply a de luxe edition of the old story of supply and demand and no matter what is said or done, aside from the necessary steps to correct the discrepancy in that equation, we will continue to find ourselves in the same position.

What has the medical profession done to keep the pace in this mad race that has been the evolution of the period 1914-1918? It is true that scientifically they have more than held their own—no one can discredit them for their achievements professionally—no one can say that, individually, they have left one stone unturned to place medicine at the top of the professions; but have they not, perhaps, by reason of old musty traditional aloofness, completely overlooked the fact that "a chain is only as strong as its weakest link," that it is only by solid co-ordinated effort that these links can be securely welded into a sound, solid chain of advancement protection of our own endeavors.

Don't stand by and leave it as a matter of course. Get out your hammers, rub the old snake oil on your trusty old right arm and pound every kink or semblance of weakening out of your professional alliance, weld them into something that cannot be overlooked—something that stands on the hill top and shouts out the glad tidings that we have found ourselves and that collectively, we must be reckoned with. Make recognition necessary.

Greetings again and every success for 1920.

Since the question of authority has finally been straightened out in the baseball leagues, we advise the little old public to "wait them out" and "try to get a free pass" instead of "biting at the high ones."

We've often wondered why the average man objects so strenuously to carrying a few bundles for friend wife but sees nothing wrong in bringing home a package of his own. Oh, well! Why worry? It's a lost art.

From newspaper reports, it appears that seats for the senate come high these days. That may explain why the upper house has been up in the air for the entire session.

Now that the Mexican situation is all straightened out—Ananias, go back to your seat. Can't you take a joke?

King Canute acquired fame through his "ability" to make the waters of the sea to recede. The only difference between old "Can" and the present day price regulators is that he got away with it.

When we were kiddies, we opined that we were all dressed up when we were arrayed in our kilts. How times do change. Nowadays, the kiddies mammas have taken up the fad.

A news item tells us that the American Red Cross here has been severely criticized by a prominent body of women for distributing cigarettes amongst our soldiers in France. Merely as a suggestion, it occurs to us that this august sisterhood might favor lollypops instead.

What is it that makes more noise than a pig under a fence? What? No, you're wrong. It's the landlord who talks a blue streak, while he is collecting the rent, for fear you may ask for some needed repairs.

"HOG."

Editorial Comments

The other night we attended a meeting of three county societies. During the course of the meeting one speaker made the following statement:

"I was on the train the other day accompanying a very sick patient to a hospital. In the smoking apartment a prosperous middle-aged man engaged me in conversation and during the course of his remarks he stated: 'I have had a lot to do with doctors in several cities and clinics. I have consulted men of different types. I believe, I have had more than ordinary experience with them and I feel that there is no trade, no business, no other profession that embodies so many dishonest men, so many grafters, so many "fleecers" of the public as the medical profession. It has been my experience that from the man "way up" at the top or the man, the ordinary "Doc" way down at the bottom, one obtains honest opinions and advice. But there is that middle class of "would be's," who are contemptible in their dishonesty, who ride a lame hobby, who endeavor to work you for all you will stand for,—well they are largely crooks in the method in which they deal with people who consult them.'"

Whew! Certainly a severe indictment. We reflected whether or not this man was not right and perforce we must admit that in part the profession is guilty as charged. The more we pondered the more were we forced to admit the fact.

We are going to cease further comment at this time. We want each reader to reflect upon the subject, discuss it at your meetings, tell us your views, tell us what to do about it.

Just once more—your 1920 dues are payable. Send your check to your local Secretary today. Please, Doctor, do not put off doing so. **Do it now.**

Everybody seems to be strung up on the highest pitch. The trigger is caught back on a hair spring and the most trivial vibration sets it off with a bang. There is a chip on everyone's shoulder and the individual seems to go around looking for some provocation to knock it off. If he isn't very successful he goes about and creates a cause—anything to start an argument. Why? Simply because we have developed a spirit of selfishness, an inclination to disregard the progress and comfort of our fellow and his right to earn a living as well as to take a nibble of the prosperity cake. It's about time to settle down and readjust ourselves. Let's get busy doing so.

Numerically we are advancing. Our membership is now larger than at any time in the history of our Society. There are, however, some 400 Doctors in our State who should be members. Will you help to secure their affiliation? Ask your neighbor to attend a meeting with you? See that he files an application for membership. We need the support every eligible Doctor in Michigan. Please help us to secure it.

Deaths

DR. GEORGE DUFFIELD.

Resolutions by the Detroit Academy of Medicine, Passed November 25, 1919.

Whereas by ruling of the Divine Creator, Dr. George Duffield, a fellow member, friend, and long-time associate, was transferred from the activities of this life, November 12, 1919;

Be it Resolved, that the Fellows of the Detroit Academy of Medicine deeply mourn the loss of a consistent and efficient member, who for many years stood for all that is noblest and best in the profession of medicine, and by his work and example evinced the spirit of brotherhood and the essence of true helpfulness;

Resolved, that this action of the Academy be spread upon its Records, and, as an expression of true sympathy, a copy of the same be transmitted to the sorrowing family.

Dr. George Duffield, a former President of the Academy, was born at the family residence on Congress Street, West, on April 28th, 1859. He came of excellent stock on both sides, his mother's relatives, the Buells, being well-known and prominent people in New York State, while his father's agnates, coming from Pennsylvania, were particularly distinguished in scientific lore, theology, law and literature.

Educated in the public schools of this city, the Philo M. Patterson private Classical and Mathematical school, he finished his preliminary course at the Orchard Lake Military Academy, where a through training, both literary and physical, fitted him for the battle of life.

Having shown from his early boyhood a peculiar interest in all that pertained to sickness and suffering, it was natural that he should turn his attention later to medicine, and he was graduated from the Detroit Medical College in 1882.

Following this he spent two years in post-graduate study in Berlin, Vienna and Heidelberg, where he took up a general review of medicine,

paying particular attention to pathology and obstetrics. Returning to this city in 1883, he began practice, opening an office in his father's house, 480 Woodward Avenue. Some years later he became associated with Dr. Henry A. Cleland, one of the oldest and best known practitioners in the city, and occupied offices with the latter in the old Cleland Block, State and Griswold streets. He remained here for many years, succeeding to the practice of Dr. Cleland following the latter's death, and, when the Peter Smith Building was erected on the same site, he continued in the old locality. In 1918 he removed to 80 Griswold Street, a downtown location being more convenient to his professional work. Dr. Duffield was elected to the Detroit Academy of Medicine in 1883, became Vice-President in 1896, and President in 1899. He was greatly interested in the work of the Society and, during the earlier years, did much to advance its interests. Although a fairly active and voluminous correspondent, he did not contribute extensively to medical literature, but what he did write was always practical and timely. In looking over the list of papers read before the Academy during the past thirty years, I find that Duffield's name occurs nine times, and the titles include such subjects as "Carcinoma," "Urinary Casts," "The Treatment of Typhoid Fever," "The Use of Antitoxine in Diphtheria," "Plea for the Earlier Diagnosis and Treatment of Pulmonary Tuberculosis," "Treatment of Diseases of the Heart associated with Tachycardia." These papers were prepared at an early date, when interest in these special subjects was just awakening, and evidence a keen and alert interest in progressive medicine.

During the early years of Dr. Duffield's experience, he devoted much time to pathology; indeed he, and the late Dr. Frank W. Brown, were the only men in Detroit who had had especial training in that subject. As a result they both did quite a laboratory business. Most of this was free work and a labor of love, the profession not yet having sufficient appreciation of the subject to suggest remuneration; so that both Brown and Duffield gradually tired of the gratuitous exhibition, and demanded pay for services rendered. This immediately caused a falling off of the work, and Duffield turned his attention to internal medicine. For many years he was a Visiting Physician to Harper Hospital, and Professor of Medicine in the Detroit College of Medicine, in both of which he later became Emeritus. For 4 years he was Secretary of the State Medical Society and, together with a committee, edited its transactions. He was one of the editors of *The Microscope*, a scientific journal devoted to micro-

scopy in all its branches. For years he edited the Harper Hospital Bulletin, a staff publication, in the interests of the Hospital. Early in his career Dr. Duffield became examiner for several insurance companies, and so greatly did his work along these lines prosper, and so popular did he become with the soliciting force that, during the past decade or so, this occupation crowded out most of private practice, and he gave practically his entire time and attention to this department. At the time of his death he was the Michigan Medical Director for the Mutual Benefit Life Insurance Company of New Jersey, and had the enviable distinction of making more examinations each year than any physician in the United States.

He was also a member of the Wayne County Medical Society; the State Medical Society, and the American Medical Association.

Socially he was connected with the Country Club, the Boat Club, and the Detroit Golf Club.

Every man places, however unconsciously, a valuation on himself; but it is impossible to determine just how Dr. Duffield appraised his personal assets. He seldom spoke in serious mood of his own qualifications, and one can judge him solely by his acts. One mentions the dead only from memory, and at this time memory troops in such overwhelming masses that selection becomes difficult, and what might be put down soon appears trivial compared with that unmentioned.

Four characteristics, however, stand out in Dr. Duffield's life; steadfastness, kindness, self-sacrifice and service.

The deaf, the halt and the blind were his friends and brothers insofar as he could reach out a helping hand in their extremity; he joyed in service, and let no personal gain or comfort stand in the way of doing what he could. The "cup of cold water" in his hands became the kindly, cheering word, the fragrant flower, the box of candy, placed where it would do most good.

In his moral code he was firmly founded; no exigency of occasion could tempt him to depart from that which he thought to be right.

He was a stanch and steadfast friend and, come weal come woe, with his broad shoulder to the wheel would push with all his energy, or, if those he loved lacked vigor, he was quick to assume the total burden to himself. Helpfulness

and service were his foremost thoughts and, harking back over the past years, one fails to ever find him wanting.

By nature sympathetic he sometimes seemed to pass too lightly over serious things, but always at the bottom of his heart he searched for that which would best bring comfort, cheer and quick relief. So truly we may say of him as Antony said of the great Roman:

"His life was gentle, and the elements
So mix'd in him that Nature might stand up,
And say to all the world, This was a man."
W. P. M.

Doctor L. J. Goux, of Detroit, died after a six months' illness at his home December 1, 1919. He was born in 1871. He graduated from the Detroit College of Medicine in 1894. His practice was limited to diseases of the eye, ear, nose and throat. He was on the staffs of Grace Hospital, Detroit, and the Eastern Michigan Hospital at Pontiac. He was a member of the Wayne County Medical Society, Michigan State Medical Society, American Medical Association, and American Academy of Ophthalmology and Oto-Laryngology.

Dr. Richard Leiman, 1692 Gratiot Ave., Detroit, was accidentally shot and killed Saturday, November 8th, while hunting with two friends on the shores of Parry Sound.

Dr. W. R. Dittmars, of North Adams, Michigan, died Sunday morning, November 2nd, at the age of 73 years. Doctor Dittmars has been ill for about two months, death being caused by hardening of the arteries.

Dr. L. R. Lumby, of Pontiac, Michigan, died November 21st, at his home. Doctor Lumby was a graduate of the University of Michigan after which he practiced medicine at Henderson, Mich. and then removed to Pontiac. Doctor Lumby is survived by the widow, four children and two sisters.

The deaths of the following doctors not members of the State Society have been reported: Dr. William P. Gamber, Ann Arbor; Dr. Gilbert A. Povey, Detroit; and Dr. W. H. Landis, Buchanan.

State News Notes

COLLECTIONS.

Physicians' Bills and Hospital Accounts collected anywhere in Michigan. H. C. VanAken, Lawyer, 309 Post Building, Battle Creek, Michigan. Reference any Bank in Battle Creek.

FOR SALE—General Practice in best town north of Grand Rapids; One Thousand Population; Good Churches and Schools; High School on approved list; Good Roads; splendid farming country. My collections were over \$7,000.00 last year. Books open to inspection; opposition nil; nearest competition twelve miles distant. Any good man can do between \$5,000.00 and \$6,000.00 first year. District remarkably free from Hay Fever. Good hunting and fishing within one hour or less by auto. Also good perfectly modern 10 room house; good garage and barn, new, good office up town. All will be sold for about half the cost of house. Reason for selling: Owner wishes to Specialize. Address "Journal 104."

Peter Green, Peter J. DuBois and Frank H. Morris of Detroit were arrested for practicing medicine without a license and Dr. Isaac Cady of Detroit for connecting himself with an unregistered person.

The Detroit Academy of Medicine celebrated its Golden Anniversary on Tuesday evening, December 9th, at the Detroit Club, with a subscription dinner. During the meal an orchestra played. The President, Doctor Ray Connor, introduced the Toastmaster, Doctor Wadsworth Warren. Doctor Walter P. Manton read a paper on "The Past of the Detroit Academy of Medicine." Doctor Frank B. Tibbals on "The Future of the Detroit Academy of Medicine" and Doctor Charles H. Baker spoke on "The Progress of Medicine During the Last Half Century." Several vaudeville acts were staged.

The following guests were present: Doctors C. H. Baker, of Bay City, President of the Michigan State Medical Society; F. C. Warnshuis, of Grand Rapids, Secretary of Michigan State Medical Society; C. T. Southworth of Monroe, Councilor 14th District of Michigan State Medical Society; G. E. Kean, President of Wayne County Medical Society; W. H. MacCraken, Dean of Detroit College of Medicine and Surgery; Captain Harrison of U. S. Army; R. G. Brain, D. M. Campbell, S. E. Crump, W. A. Defnet, Francis Duffield, W. A. Evans, A. H. Garvin, Stewart Hamilton, L. J. Hirschmann, George Lowrie, A. D. McAlpine, P. F. Morse, H. W. Plaggemeyer,

H. H. Sanderson, Frank Walker, Frank Sladen and W. J. Wilson, Jr. (23).

Doctors Daniel LaFerte, of Detroit, Honorary Fellow and C. B. Burr, of Flint, Corresponding Fellow, sat down to dinner with us.

All (34) of the Active Fellows of the Academy were present: Doctors C. D. Aaron, Max Ballin, A. P. Biddle, W. R. Chittick, A. N. Collins, T. B. Cooley, G. L. Connor, Ray Connor, R. W. Gilman, E. W. Haass, P. M. Hickey, C. W. Hitchcock, A. D. Holmes, C. G. Jennings, A. Jennings, H. D. Jenks, G. L. Kiefer, L. E. Maire, W. P. Manton, Walter Manton, W. E. Metcalf, W. H. Morley, Delos Parker, H. M. Rich, F. W. Robbins, H. E. Safford, B. R. Shurly, W. A. Spitzley, H. L. Simpson, F. B. Tibbals, H. R. Varney, J. W. Vaughan, Wadsworth Warren and Hedley Williamson.

The Graduate School of Medicine of the University of Pennsylvania opened in October, and according to George H. Meeker, dean of the University of Pennsylvania, there are sixty-three physicians in actual attendance, about thirty have been turned away because of the present limited accommodations, and nearly fifty are already applicants for the courses of the next semester, which begins Feb. 9, 1920. The general plan for the University Graduate School of Medicine is as follows: A central university organization as now or to be constituted, having as its special business graduate medical education. The co-operation of other university groups, especially the Undergraduate School of Medicine. The co-operation of the hospitals of Philadelphia generally, not as integral parts of the university, but affiliated through their staffs and clinical and physical facilities, in this important movement for Philadelphia, under the educational control of the university. This general hospital co-operation is still in its beginnings. The co-operation of public and private philanthropies, in contributing toward the large funds without which the goal will be difficult or impossible to reach. In 1916, a merger between the University of Pennsylvania and the Medico-Chirurgical College of Philadelphia was effected. By the conditions of this merger the Medico-Chirurgical College became an integral part of the University of Pennsylvania as its Graduate School of Medicine and the heads of the clinical departments were constituted a nucleus for the faculty of the new school. By merger with the university in 1918 the Philadelphia Polyclinic and College for Graduates in Medicine, with its facilities for graduate medical instruction, was further added as the "Polyclinic Section" of the Graduate School of Medicine con-

stituted as above. On this foundation, and with some valuable assistance from the Undergraduate School of Medicine and a few of the hospitals of Philadelphia, the work of the new school has been started.

To the Wayne County Medical Society:

Your Committee to investigate the Dr. W. F. Koch Cancer Treatment, begs leave to report as follows:

The Board of Health kindly placed at our disposal twelve beds at the Herman Kiefer Hospital, with the necessary special nurses, and everything else required, free of charge, so that we could send people there who were not able to pay. We sent there patients of our own, and also some recommended by different physicians as proper cases for treatment. We had altogether nine patients there.

After looking them over carefully, we found some where the diagnosis was doubtful. These were discharged, and some left of their own accord. We had five patients, however, of undoubted cancer, from which we had specimens and microscopic slides, making the diagnosis positive.

We turned the treatment and management of these cases over to Dr. Koch, all we wanted to do was to watch them. Dr. Koch from time to time insisted on certain investigations. First, he wanted thorough histories of the cases, and then diagrams of the location and size of the growth, so that any changes could be readily detected. Of course, we naturally did that ourselves. Then he insisted on scientific blood examinations, the estimation of non-coagulable protein, cholesterol, etc. As we had no available man to make these, Dr. Koch agreed to get one, and we guaranteed that the man would be paid. He also objected to some of the members of the Committee, saying that he ought to have some representative on it. We agreed to put on any and all he would name. He failed to either name any or to find a physiologic chemist to make the blood examinations he insisted on.

In his treatment he was very negligent, not treating the patients regularly or systematically, as he agreed to do. For instance, Mrs. A. he treated five times to wit:

Entered Oct. 23, first treatment Nov. 4-7-11-26-29.

Entered Nov. 4, Mrs. B., first treatment Nov. 11-26-29.

Entered Oct. 28, Mrs. C., first treatment Nov. 4-7-11-29.

The others about the same way.

We had a final meeting with him November 26, when we were at the Herman Kiefer Hospital, and went over all the cases with him. He gave them the injections, and everything was satisfac-

tory, and he promised to attend to the treatment regularly, which he had failed to do before this time. He promised to go there the next day but failed to do so. He came there Saturday, Nov. 29, and he has not been seen since.

As the patients were disgusted with this neglect of treatment, some of them left, the rest we sent home, and closed our connection with the investigation of the subject.

You can readily see that with such few and irregular treatments, nothing could be accomplished and nothing found out about the value, or lack of value, of the treatment.

All of which is respectfully submitted, and your Committee begs leave to be discharged from the further consideration of the subject.

Yours truly,

J. H. Carstens,
W. P. Manton,
J. H. Andries,
J. Walter Vaughan,
James E. Davis.

Announcement is made of the proposal to perpetuate the work of Oak Grove Hospital in Flint. As was mentioned in a former editorial notice, the hospital will retire from the field of psychiatry on April 28th, 1920.

Dr. Irwin H. Neff, formerly Superintendent of the Foxborough State Hospital, Massachusetts, and for the past five years Superintendent of the Norfolk State Hospital in Boston, who is favorably known in Michigan through his previous connection with the state hospitals at Pontiac and Kalamazoo, is heading the new enterprise.

He is assisted by Dr. George K. Pratt who, previous and subsequent to two years in the Department of Neuro-Psychiatry in the Army, both at home and in France, has been a member of the medical staff of Oak Grove.

At a recent meeting of the Board of Directors of Oak Grove, the new organization was voted the good will and endorsement of the present stockholders. The consent was also given to use the same corporate name, "Oak Grove."

It is contemplated by the new organization to purchase property near Flint owned by the former County Club and erect modern buildings.

The League of Red Cross Societies of the Nations of the World is to have a noteworthy American as its General Medical Director. The League is to have its headquarters at Geneva and it will act as a centralized agency for the improvement of public health, the prevention of disease, and the mitigation of suffering throughout the world.

It will serve in cases of national or international disaster and will act as a medium for bringing within the reach of all the benefits of present known medical facts and new contributions of science and medical knowledge.

The American who is to have charge of the public health work and the general medical activities is Doctor Richard P. Strong, Professor of Tropical Medicine at the Harvard Medical School. Doctor Strong graduated from the Johns Hopkins Medical School in 1897. This was the first class to graduate from that institution. He made a brilliant record as a student of tropical diseases in the Philippines. He was the leader of the international corps of workers who wiped out the typhus epidemic in Serbia. During the war he was in charge of the division of infectious diseases of the American Expeditionary Forces and of the investigations carried out upon trench fever. He also was the representative of the A. E. F. and the United States on the Interallied Sanitary Commission, which co-ordinated the sanitary and medical work of the various Allied armies.

For his services he won the American Distinguished Service Medal, the British Order of Commander of the Bath, was made an officer of the French Legion of Honor, and was made Grand Officer of the Serbian Cross of St. Salva. He also holds the Chinese Order of the Striped Tiger.

If Dr. Fritch of Detroit had been released from Jackson Prison by means of a pardon, he would never again have hung out his shingle in Michigan. As it was, by a new trial and an acquittal he saved his right to practice, because a revocation of license cannot be accomplished without a certification of conviction. So the doctor returned to Detroit and resumed his career of consistent infidelity to the ideals of his profession and went his way until the law overwhelmed him.

This time the raven croaked in earnest. Unfortunately, while the eminent specialist remains in Marquette Prison he cannot lose his license, because, being in jail, he is unable to appear before the State Board of Registration in Medicine. But when he is once free there will be no technical disabilities to interfere with proper disposition of his case and the man, whose oft-proclaimed iniquity is a smell to heaven, will be prevented from continuing butchery in the disguise of a surgeon. (Detroit Saturday Night, Dec. 13, 1919).

Colonel H. A. Metz, president of the H. A. Metz Laboratories, Inc., has donated the necessary funds to the Volunteer Hospital, of New York, for the

installation and development of a urological and syphological department, both in the hospital and its dispensary. It is the hope of Colonel Metz that the department will not only be able to do the usual ambulatorium and bedside work of such a subdivision but that it will also engage in research work which may lead to preventive measures and to treatment to lessen the evils of syphilis, for the betterment of the race.

This donation by Colonel Metz is in keeping with his action in developing a large scientific organization in his laboratories in Brooklyn. He has on his staff a number of eminent biologic and physiologic chemists who are engaged in research work, not only in connection with Salvarsan and Neosalvarsan, but other products, quite foreign to the arsenicals, are being studied and developed by these experts.

The Abbott Laboratories of Chicago, have been using half page space in this Journal. Their success warrants them in using a full page at this time. This evidence that the readers of this Journal are careful to patronize our advertisers is gratifying, and is a tribute to the policy which this Journal long since adopted, of publishing in its advertising pages only such medical products as have been accepted by the Council on Pharmacy and Chemistry.

The readers have come to know that this Journal protects them; and as a consequence they may unhesitatingly purchase the products which are advertised in this publication.

In answering the Abbott advertisement, each reader should use the coupon attached to the page advertisement, so this Journal will receive credit for the inquiry.

Dr. A. F. Kingsley, for eight years the Secretary of the Calhoun County Society, declined re-election at the last annual meeting of that organization. Dr. Kingsley, by his activity and organizational ability, was very material in causing his county society to attain a splendid record in meetings and community influence. Dr. Kingsley also inaugurated the Society Bulletin and edited it for six years. We acknowledge the splendid co-operation he has always subscribed to the state society and his promptness in sending in reports. The *Journal* knows he will continue his activity in society affairs and extends its thanks for his past labors.

At the recent convocation of the American College of Surgeons the following Michigan surgeons were elected to fellowship:

J. A. Attridge, Port Huron; R. I. Busard, Muskegon Heights; E. I. Carr, Lansing; B. N. Colver, Battle Creek; W. F. Finton, Jackson; A. F. Fischer, Hancock; C. B. Fulkerson, Kalamazoo; A. J. Mackenzie, Port Huron; M. M. Peet, Ann Arbor; A. B. Poppen, Muskegon; B. B. Rowe, Saginaw; A. B. Smith, Grand Rapids; F. N. Smith, Grand Rapids; E. D. Wilbur, Kalamazoo; R. C. Winslow, Battle Creek.

Northwestern University has secured an option on nine acres of land on the lake front at Chicago Avenue, Chicago, on which it is planned to erect within ten years buildings for its Departments of Medicine, Dentistry, Law, and Commerce. These buildings are to cost approximately \$1,350,000. It is expected eventually that on the Medical School alone \$2,500,000 will be expended. To carry out these plans the University has begun a campaign to raise \$25,000,000, half of which it is expected will be obtained by June, 1920.

The Detroit Chapter of the American Officers of the Great War held an organization meeting at the Detroit Board of Commerce on Tuesday evening, December 2, 1919. Doctors Angus McLean and Frank Walker were elected to the Board of Trustees (composed of five men). This organization continues until the National Officers Meeting to be held in Detroit, September, 1920. Some two hundred members signed the constitution as charter members.

On October 15th, 1919, Surgeon-General William C. Braisted of the U. S. Navy Medical Corps was elected an honorary fellow of the Royal College of Surgeons of Edinburgh. At the same time the Director Generals of the British Medical Service and of the Belgian, French, Italian, and Japanese medical services were honored with membership.

Doctor Bertrand L. Jones, formerly first assistant at the State Psychopathic Hospital at Ann Arbor, has located in Detroit. He is Chief of the Neurological Out-Patient Department at Harper Hospital and Attending Neuro-Psychiatrist at the Receiving Hospital, Detroit.

The destruction by fire of the Mercy Hospital, Big Rapids, and the loss of the lives of three patients was a lamentable affair. The cause of the fire remains undetermined. Plans for the erection of a new hospital are under consideration.

Representatives of the several hospitals of the state held a meeting in Lansing on Dec. 12th and organized a state hospital association, electing Dr. Warren Babcock of Detroit as its first president.

If you like this issue and want similar ones you must aid us in our advertising campaign by patronizing those who advertise with us.

Please note the new ads in this issue. To retain them we invite and urge that you patronize these advertisers.

Dr. W. C. Kools, of Holland, and Miss Wilma Denabel were married in Kalamazoo during the latter part of November.

Dr. C. A. Teifer, of Muskegon, has resigned as surgeon for the Continental Motor Co. and entered private practice.

The physicians of Monroe have organized a social club for frequent social and scientific meetings.

Dr. and Mrs. Noah Bates, of Flint, celebrated their 60th wedding anniversary on Dec. 7th.

Dr. E. B. McDaniel has left Crystal Falls and has gone for a five year trip and stay in Siam.

Dr. E. J. Greer, of Pontiac, has moved to Oxford.

Dr. T. R. Whitmarsh has located in the Soo.

Dr. W. C. Hobeke has located in Kalamazoo.

Dr. J. G. Webster has located in Marlette.

COUNTY SOCIETY NEWS

It is the Editor's desire to have this department of the Journal contain the report of every meeting that is held by a Local Society. Secretaries are urged to send in these reports promptly

BARRY COUNTY.

The Barry County Medical Society, after a period of three years of passed meetings, resumed its meetings on Dec. 12, 1919, and elected the following officers for the ensuing year:

President—Dr. C. H. Barber.

Vice-President—Dr. E. T. Morris, Nashville.

Secretary-Treasurer—Dr. A. W. Woodburne.

Delegate—Dr. G. W. Lowry.

Alternate—Dr. Swift, Middleville.

Medico-Legal—Dr. E. T. Morris, Nashville.

Board of Directors—President, Vice-President, Secretary-Treasurer, Medico-Legal Representative and Dr. Lowry making five in all.

Next meeting to be held January 9, 1920.

GENESEE COUNTY.

On Wednesday, Nov. 5, the Genesee County Medical Society met at noon luncheon with upwards of 60 members present. Dr. H. E. Randall, in his Presidential address, referred to the splendid spirit of harmony existing in this Society and to this he attributed the prosperity of the profession here. He recalled the rich heritage of knowledge left to us by our predecessors, and stated that for this reason every doctor owed a debt to the profession at large. Doctors without the stimulus of the Medical Society become intellectually lazy. We can do better work by judicious reading, by frequent consultations, and by attending medical meetings. He believed that we as a profession were largely responsible for the various cults springing up, and urged us to make good use of all our therapeutic resources, including modern Psycho-Therapeutics. He stated that the profession should be active in public work of an educational nature, such as the Red Cross, Boy Scouts, and instruction in first aid work. He made many valuable suggestions for the work of the Society, and urged the members to become more active in submitting clinical reports of interesting and obscure cases.

Dr. Plinn Morse, Pathologist of Harper Hospital, Detroit, gave a most interesting and instructive talk on "The Prognosis of Nephritis." He briefly reviewed the newer Physiology of the Kidney, described the more reliable functional tests, and showed their value in making a correct diagnosis and safe prognosis. The address was well illustrated by charts and lantern slides.

The Society again met on Wednesday, Nov. 19, 1919. Five new members were elected. Dr. Wm. Lyon of Flint spoke on "The Treatment of Hernia in Infancy." He clearly described the newer methods of curing Hernias by simple means in infancy, and gave the indications for radical surgical intervention. Dr. Angus McLean of Detroit gave an address on "Goitre, with special reference to its metastasising effects." He showed some interesting pathological specimens and lantern slides. Of special interest were case reports of metastases to bones and other tissues from benign Thyroid Neoplasms. These might destroy life either by direct pressure or by becoming malignant. For this reason, he urged the prompt removal of all diseased Thyroids.

W. H. Marshall, Secretary.

KENT COUNTY.

The thirteenth meeting of the Kent County Medical Society, 1919, was held at the Hotel

Pantlind in the afternoon and evening of Nov. 25. President H. J. Vandenberg presiding.

On account of delay in beginning program regular order of business was waived.

The first and second papers by Drs. Slemmons and Brook were on the subject of Contagious Diseases.

Dr. C. C. Slemmons gave an interesting talk on the subject of Diagnosis of Measles, Scarlet Fever, Small Pox and Chicken Pox, in which he emphasized his individual experience in the diagnosis of these diseases. On account of his long experience in the capacity of health officer of our city his opinions lend conviction to his statements.

Dr. J. D. Brooks emphasized the need of giving antitoxin early in the course of diphtheria and giving it in large doses and in severe cases pointed out the advantage of giving it intravenously.

Discussed by Drs. McCall, Rigterink, Spencer, Strong, Wells, Williams, Fuller, Johnston, Slemmons and Brooks.

Dr. J. D. Bruce gave a very interesting and instructive talk on "Some Factors in the Mortality of Middle Life" in which he laid special stress upon the influence of blood pressure on longevity.

Discussions by Drs. Wells, Johnston, Whinnery and Bruce.

Dr. C. H. Johnston described a "New and Easily Applied Test for Hyperthyroidism" which consists in injecting one-half cc. of adrenalin sol and frequently observing the blood pressure which is quickly raised in case hyperthyroidism is present.

Discussed by Drs. Smith, Corbin, Brook and Williams.

At the evening session a dinner was enjoyed by some sixty members of Kent, Ionia and Otawata counties at 6:30, after which the speaker of the evening gave a very clear and concise exposition of the subject "The Present Status of Surgery of the Breast."

Discussed by Drs. Campbell, Rigterink, Murites, Johnston, McBride and Smith.

Dr. Crane followed Dr. Smith with a very interesting account of his experiences in German Prison Camps during the world war, exhibiting many pictures of German officers.

The closing talk of the evening was given by Dr. F. A. Boet. Dr. Boet touched many humorous points and a few serious ones, some of which merit free discussion at a date when there is abundant time at the societies disposal.

There being no further business the meeting adjourned.

SANILAC COUNTY

The Nineteenth Annual Meeting of Sanilac County Medical Society was held in the Court House, Sandusky, Wednesday, Dec. 17th, at 1:30 P. M., for the purpose of electing officers for the ensuing year. The following officers were elected:

President—John E. Campbell, Brown City.
Vice-President—J. C. Webster, Marlette.
Secretary-Treasurer—J. W. Scott, Sandusky.
Medico-Legal Officer—D. D. McNaughton, Argyle.
Delegate—C. G. Woodhull, Marlette.
Alternate—J. C. Webster, Marlette.

J. W. SCOTT, Secretary.

Book Reviews

NERVOUS AND MENTAL DISEASES. By Archibald Church, M.D., Professor of Nervous and Mental Diseases in Northwestern University Medical School, Chicago; and Frederick Peterson, M.D., formerly Professor of Psychiatry, Columbia University. Ninth edition, revised. Octavo volume of 949 pages, with 350 illustrations. Philadelphia and London: W. B. Saunders Company, 1919. Cloth, \$7.00 net.

The ninth edition of a work that has long occupied the eminent position this book has, calls for no further review. We simply renew our approbation and congratulations. It is made to impart the latest approved opinions and viewpoints. It should be in the library of every doctor.

A TEXT-BOOK UPON THE PATHOGENIC BACTERIA AND PROTOZOA. FOR STUDENTS OF MEDICINE AND PHYSICIANS. By Joseph McFarland, M.D., Professor of Pathology and Bacteriology in the University of Pennsylvania. Ninth edition, thoroughly revised. Octavo of 858 pages with 330 illustrations, a number of them in colors. Philadelphia and London: W. B. Saunders Company, 1919. Cloth, \$4.75 net.

This ninth edition, almost completely revised, is thus brought up to date and provides us with a most reliable reference, text and guide. This is a work that is valuable to the surgeon and practitioner as well as to the laboratory worker. It is indeed a most practical and scientific work and modern in every detail. We congratulate the author and publishers.

MANUAL OF OBSTETRICS. Edward P. Davis, M.D., F.A.C.S., Professor of Obstetrics Jefferson Medical College, Philadelphia. Second edition, cloth, 478 pp. W. B. Saunders Co., Price \$2.50.

Including the newer obstetrical procedures this second edition of what has proven to be a most valuable manual now attains the position of being the best manual on the subject. Comprehensive, practical and modern in every paragraph, it supplies one with a guide that will enable him to arrive at a wise decision in the modern application of approved obstetrical principles.

Miscellany

AN UNNECESSARY EVIL

Diphtheria, the terror of our childhood days, is now recognized as an unnecessary evil. The fight of the health officials against diphtheria has been reduced to a battle against ignorance. If every parent could know the facts concerning the prevention and cure of this bane of child life, diphtheria would soon be relegated to its proper places among the obsolete diseases.

Then why do so many patients die from diphtheria? There are several reasons. The principal one is that many die through carelessness or neglect in the same manner that more deaths occur from measles than scarlet fever. There was a time when disease and untimely death were looked upon as inevitable happenings—mysterious visitations imposed upon mankind by an all-wise Providence. Fortunately, the advance of preventive medicine has demonstrated that heaven helps those who help themselves, and that a submissive knee need not be bent to communicable diseases.

Diphtheria killed 270 Detroit children in 1918. At present there is a prevalence of diphtheria in mild form, the number of cases being considerably above normal. Because of the mildness of the attack and the unusual number of cases, the department is experiencing considerable difficulty in enforcing the quarantine. It has been necessary to arrest several violators. The minimum court fine is \$25. As a rule dread of the law is greater than dread of the disease and a fine is a positive "cure." During the past month eight quarantine violators were taken into court by the health quarantine officer. None escaped punishment and one woman drew a fine of \$100. Police Justice Cotter has issued a warning that future violators will be sentenced, to jail for periods ranging from 30 to 90 days, without the option of a fine.

The "carrier" cases present a problem. A "carrier" is one who is not clinically ill, but who has the diphtheria germs in the nose or throat, as revealed by bacteriological examination. Such cases may be "carriers" today and clinical cases tomorrow; or they may be dead before the parents are willing to admit that the child has diphtheria.

Frequently children are discovered with a positive culture, but no clinical evidence of illness. The parents demand to know why the family is isolated—the father wants to go to work, the mother wants to shop, Tillie must go to the "movies," and Johnny wants to play with the

other boys instead of remaining indoors. The health department is blamed for enforcing "foolish" rules and complaints are filed.

"My Johnny is as well as I am," says the father. "The health department is all wrong. They say he has diphtheria, but I know he ain't and I've been a citizen of Detroit for 40 years."

Of course, when the parents feel that way about it, there is pretty good reason to believe that Johnny will not remain long in "durance vile." He will be out playing with the other children in the neighborhood and soon the same story will be repeated in several homes in that immediate vicinity. Is it any wonder that diphtheria spreads?

Science has provided both a prophylactic and a cure for the disease. Ignorance and carelessness are the barriers against which medical science is helpless in effectively checking the spread of the disease. Children can be vaccinated and protected against diphtheria almost as effectively as they can be protected by vaccination against smallpox.

All persons are not susceptible to the disease. A small proportion of children are immune from birth and a large percentage during the nursing period. At the age of one year about 30 per cent. are non-susceptible and the percentage of immunes increases as children grow older until at the age of 20 immunity extends to perhaps 85 per cent. This is the reason that so few cases develop in adults.

Not content with furnishing both a preventive and a cure for diphtheria, science has taken a further step by providing a means to determine whether or not a person is susceptible to the disease. This method of determining immunity is known as the Shick test. It is very simple and consists in injecting a few drops of prepared diphtheria toxin into the skin and then watching for the appearance of the characteristic red spot where the injection was made. If such a spot does not occur within two or three days it shows that the person can not catch diphtheria. There is no pain, soreness or sickness connected with the test.

For those in whom the characteristic redness appears and who are therefore known to be susceptible to diphtheria infection, physicians now recommend a course of preventive injections similar to those which have proven so successful against typhoid fever. This protective treatment consists of three small injections of toxin-antitoxin, a week apart. There is no sore such as follows vaccinations against small pox and the injections are harmless. Even when diphtheria develops there is no reason for its terminating fatally, provided antitoxin be administered soon enough and in sufficiently large dose.

The prophylactic dose varies from 1000 to 3000 and the curative dose from 5000 to 20000.—(Bulletin of Detroit Board of Health, November 1919.)

ALCOHOL AND CRIME.

M. J. Rowe, M. D.

With such almost universal distrust of statistics it seems best to subscribe to the belief generally held in clinical medical studies, that the careful study of a small group is more enlightening than the superficial survey of a mass of material. Anyone who has considered the problems of the inefficient, whether he is particularly interested in the physically, the mentally, the socially or the industrially inefficient, must admit that alcohol has its evil effects; but we are surely not warranted in charging all of the evils of society to alcohol. We are justified, however, in believing that 60 per cent. of all crimes of violence are directly due to alcohol; that half the crimes of sex are due to alcohol; that possibly 10 per cent. to 15 per cent. of the premeditated crimes of acquisitiveness are the result of alcoholic excesses and that 10 per cent. of the insanity is due to alcohol and that by reason of the ideas peculiar to these patients, they are all potentially criminals; that many crimes are committed by the feeble-minded, whose alcoholism is only a symptom; that alcoholism and criminal acts are both symptoms of some forms of insanity; that alcoholism does excite to violence some insane and epileptics who would be harmless if they had no access to alcohol, and that the state annually spends over one-third of a million dollars in looking after those who come into contact with the law because of their alcoholic habits.

And finally, we must conclude that the effect of alcohol varies with the individual susceptibility and that an inherent defect of the mental makeup must be present in those cases where excesses and other untoward effects occur.—(Jour. of Delinquency, July 19.)

NOTES ON RE-AMPUTATION.*

A. E. Chisholm, F.R.C.S. Edin.

Late Captain R.A.M.C. Edin.

Some reasons for re-amputation.

1. Adherent scar with weak or partial healing. If the scar is terminal, and especially if adherent to bone, it is apt to become irritated by pressure of the artificial limb. If lateral and adherent to the bone near its end, there is apt to be trouble from dragging. Such scars may break down. "A large or small adherent scar is not necessarily an indication for re-amputation. Many cases with an adherent thin scar do well—better than they would with a better scar and a

*The British Medical Journal, July 19, No. 3055.

shorter stump. It is when the stump is conical and has a large terminal scar or ulcer that a re-amputation may become necessary."

2. A chronic granulating surface, especially if terminal and near the end of the bone, is very likely to lead to weak and unsatisfactory healing, with adhesions to the end of the bone, or healing may fail altogether.

3. The presence of sinuses. Huggins says: "No aseptic operation should be performed on a stump until all sinuses have been healed for two or three months." I hesitate to express an opinion contrary to one with so large an experience, but I think that at least in cases with very mild sepsis in the sinuses, much time may be saved and a good result obtained by re-amputation, provided certain precautions are observed.

4. Sequestra. It is usually wiser to re-amputate than to be content with removal of the terminal sequestrum; time will thus be saved as the separation of the sequestrum alone be performed, the resulting end of the bone is likely to be irregular and ill adapted for weight bearing. The operation.

1. Avoid a terminal scar.

2. It is rarely wise or necessary to include muscle in the flaps. A good fibrous pad is formed between the skin with its integuments and the sawn end of bone.

3. Re-amputate clear of the disability for which a re-amputation is being performed, and try to make sure that no further operation will be necessary. The object of re-amputation is to get a good, sound, serviceable stump. It is far better to sacrifice a little extra bone, provided it can be spared, than to risk a poor result with the possibility of yet another re-amputation having to be performed some weeks or months later, just because the operation has been too close to or within the danger zone. The flaps should be cut clear of the scar unless there is some real reason in a special case against such a procedure. The scar especially should be avoided if there is the slightest suspicion of sepsis.

4. Re-amputation should not be performed in presence of an active sepsis wound. Healthy granulation is not a contra-indication, but a really septic granulation surface should be considered a danger signal. The folly of hastening matters in such cases has been proved.

5. If the wound fills up with clot—example, after a reactionary hemorrhage, it is well to open it right up under a general anaesthetic, clear out the clot, re-suture and drain in the usual way. Otherwise there will be great risk of a septic state ensuing.

6. If skin is scanty, and if it is important to preserve the length of the stump with a view to future function and fitting, extention may be applied by means of glue or strapping stretching from the stump to some form of wire splint.

This may be in use for days or even weeks prior to operation, and a considerable gain may be achieved.

7. In amputation a short distance below the knee it is well to apply a posterior splint before the patient comes out of the anaesthetic, for there is a great tendency for the knee to assume the flexed attitude of rest, and, if convalescence be delayed, a certain amount of contracture of the hamstrings, often difficult to overcome, may take place.

8. If sepsis appears in a mild form after operation, fomentations or Carrels treatment may be applied for a few days.

9. In amputations below the knee the anterior edge of the tibia should be bevelled so as to prevent the sharp edge from pressing on the anterior flap. It is important also to divide the fibula about a quarter of an inch higher up than the tibia, otherwise fitting of the artificial limb will be interfered with. According to Huggins it is important to preserve the interosseous membrane so as to prevent outward displacement of the fibula.

OVERLAP OF SO-CALLED PROTOPATHIC SENSIBILITY AS SEEN IN PERIPHERAL LESIONS.

Conclusions—

1. The area of prick pain supplied exclusively by an individual nerve is far less than the accepted sensory distribution of that nerve.

2. The area between the border of exclusive supply of prick pain of an individual nerve and the border of its accepted sensory supply constitutes the area of algescic nerve overlap.

3. When nerves serving adjacent areas are severed, sensibility to prick pain between these areas is not present after injury, nor does it return before the sense of touch.

4. When a region in the area of sensory distribution of a severed peripheral nerve is sensitive to prick pain, and this region is adjacent to another nerve area, if this nerve be severed, complete analgesia results in the previous sensitive region.

5. When sensibility to prick pain is present or returns in the area of possible overlap on the sensory distribution of a severed nerve, subsequent resection and suture of this nerve does not change the general extent of this sensitive area, although the borders may be at times slightly enlarged or diminished. That is, the pain sense returned or present before the operation was not due to partial regeneration.

6. The laws governing the assumption of function by nerves adjacent to a severed nerve are unknown.

7. Handling and resection and suture of previously divided nerves changes the condition governing the function of overlapping nerves, often initiating greater function.

8. Evidence of the assumption of function by nerves adjacent to a severed nerve is not present immediately following the nerve injury, but gradually shows itself at a later date.

9. The early return of the sense of prick pain before the return of sense of touch is not due to temporal dissociation of epicritic and protopathic sensibilities, but is due to the assumption of function by adjacent overlapping nerves.

10. The areas of overlap may be determined with fair accuracy and return of sense of prick pain in those areas can not be interposed as a sign of regeneration of the divided nerve.

11. The changes in prick pain following division of a single nerve are not a safe basis for conclusions regarding regeneration of that nerve.

12. Only when a group of nerves is divided at the same time can the studies of sensation be used in the interpretation of regeneration of the nerves. Under these conditions only that part of the analgesic area may profitably be studied which is removed from the effect of overlap from adjacent nerves. On the other hand, if return to sensibility to prick pain occurs on the border of an uninjured adjacent nerve, this return to sensibility does not indicate regeneration of a nerve.

13. Return of sensibility to prick pain can be used clinically for the determination of nerve regeneration only when it is accompanied by return of tactile sense or when it occurs outside the area of possible overlap of adjacent nerves. —(Arch. of Neur. & Psych., December 1919, L. J. Pollock.)

THE EDUCATIONAL TREATMENT OF DEFECTIVES.

By Alice M. Nash, Principal, School Department
and
S. D. Porteus, Director of Research, Training School, Vineland
Summary.

1. In a great many cases the special class fails either because it is not fitting the defective for any occupation or because he does not follow in after life the occupation for which he has been trained.

2. Children vary just as much in their capacities for manual training as they do in scholastic abilities. In the great majority of instances special classes are not paying attention to this fact. Teaching a defective some scraps of woodwork or basketry is not helping very much to solve the question of his ultimate self-support.

3. There are indirect advantages of special class work with defectives, the main one being that the regular grades may do better when the feeble-minded are eliminated.

4. The purpose of this paper is to put down Vineland's educational experience. Its plan is to take each subject in turn and to attempt to justify

its position in the curriculum of the special school or special classes.

5. An important point is the right selection of children for training in the various departments. For scholastic training the Binet tests give the best basis of classification. For industrial abilities the Porteus tests give the best indications.

6. Some labor-saving rules that have been evolved from our experience are:

(1) Children two years or less mentally (average Binet-Porteus age) are excluded from kindergarten because they are found to make no permanent gain.

(2) Children of seven years and less, Binet age, make no use of reading, whether for pleasure or profit. Children with I. Q.'s below 50 should not be given any instruction in ordinary school subjects at all.

(3) As regards number work, defectives mentally less than 9 years per Binet, unless displaying special aptitude, should be given only the most elementary work. Operations involving the use of pen and paper are useless for such defectives. They either do not use or do not understand such operations.

7. Needlework is one of the most practical occupations for defectives because it suits the middle as well as the higher grades, the equipment is cheap, there is ample demand for workers, and finally, it must eventually contribute, if not to self-support, at least to self-help. The best work is not always done by those grading higher per Binet.

8. Woodwork is one of the most attractive of occupations for defectives, but its value is seriously limited by the fact that the trades which it leads to are too highly skilled for the defective to achieve competency in them. A few with special aptitudes may find scope here, but, for the majority, it must remain hobby work.

9. Domestic training has great value because it has range enough for all kinds of defective ability and it presents to the higher grades a means of livelihood. Within an institution it is essential to have well-trained workers.

10. Basketry is one of the poorest means of training, because it is slow and unprofitable, and has no future as regards the child. It is much in favor because children's work may provide an attractive exhibit and it is, to certain children, a pleasurable occupation. The defective who can and does earn his living hereby is very rare.

11. School gardening on a practical scale is not possible in the city school systems where most of the special classes are. It is fine work for children, but suffers from the fact that farm labor to which it leads, is very often drudgery from which the high-grade defective quickly escapes to take up easier and better-paid work as a factory hand.



The Importance of Larger Doses

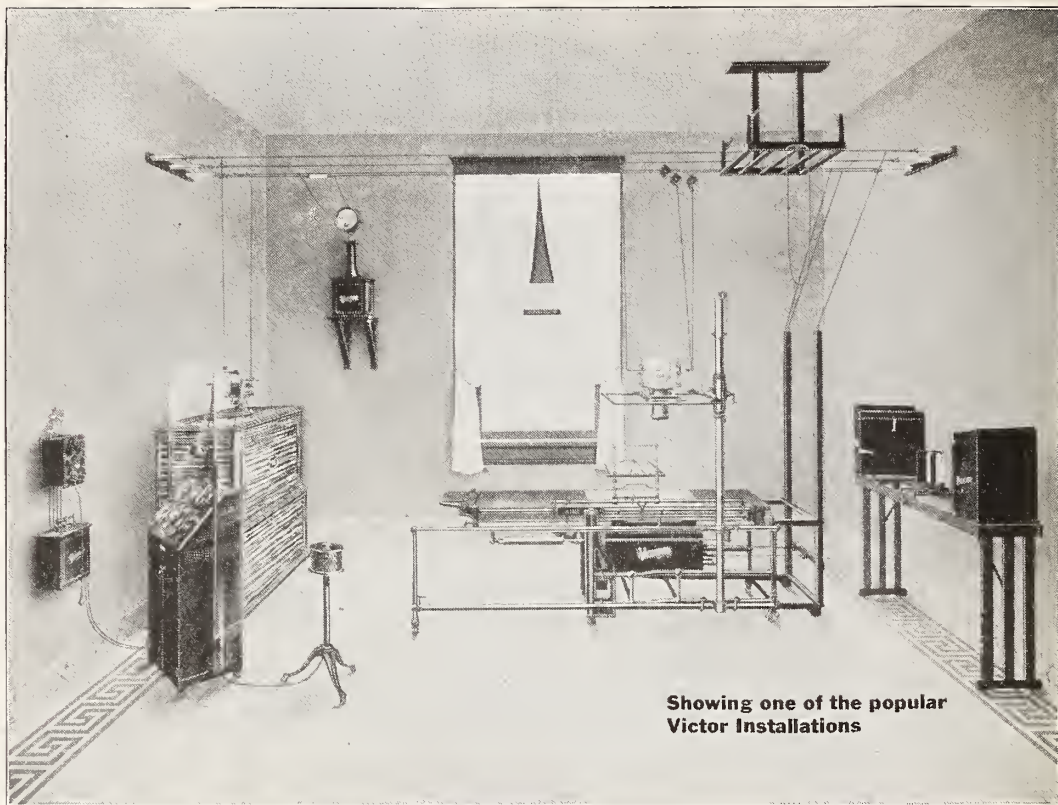
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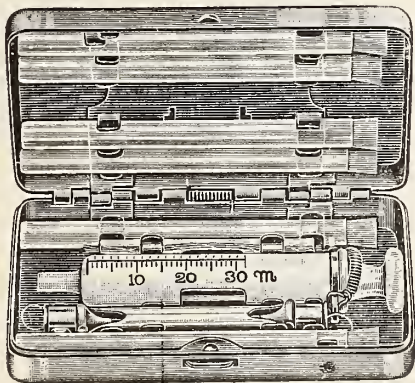
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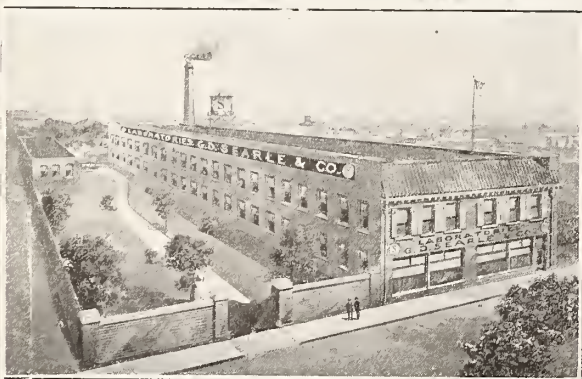


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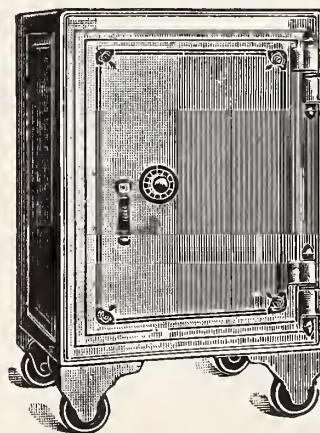
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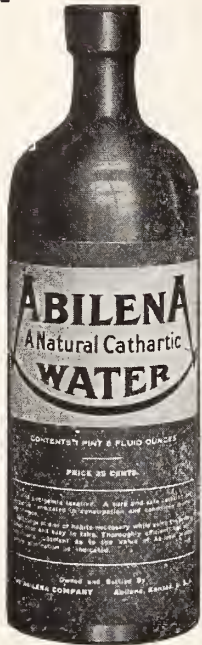
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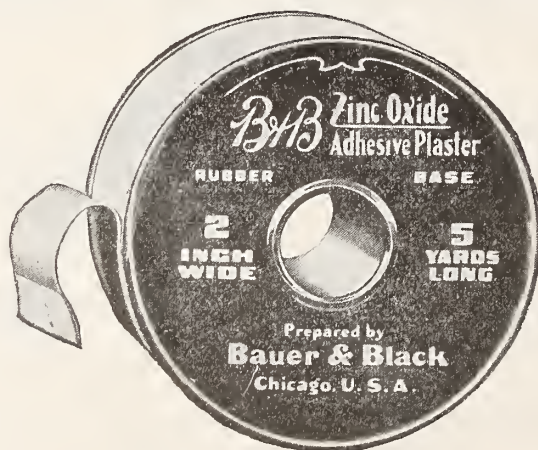
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The Journal

OF THE

Michigan State Medical Society

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

Vol. XIX

GRAND RAPIDS, MICHIGAN, FEBRUARY, 1920

No. 2

Original Articles

RADICALISM VERSUS SOUND JUDGMENT.

RAY R. REED, D.D.S.

BAY CITY, MICHIGAN.

The human mind is a collection of thoughts induced by daily contact and observations. It changes with the custom of the age. The psychological factors which enter into the changing of one's mind are interesting. Magnification, is the essential requirement necessary in "putting across" an idea or thought. This is portrayed in childhood, starting with the fairy tales and the goblins. In the process of primary education the mind is caused to become developed by problems in arithmetic and lessons in geography, the importance of which is magnified greatly in the child's mind in order to obtain the desired results. This method of development is not merely a method of childhood. We come in contact with it every day. The advertiser attracts us with huge signs soliciting his particular business. The larger the sign and the brighter the colors, the more apt are we to heed its message. The daily paper startles us with glaring headlines, in order that we will purchase and learn the truth, quite different from the original thought. It takes a radical in any line to cause the laity to make the proper deductions.

The criticism often heard, of men in special fields of medicine and dentistry, is that they are too radical. They lay too much claim to the importance of their field. This is true, to a certain extent, but let us give credit where credit is due.

In the development of medicine we find landmarks consisting of certain fads and fancies. They have all had their trial, and errors have been discovered. I speak of such fads as operation for gastropexy, splenectomies for

pernicious anemia, electro-therapy for neuritis, emetin for pyorrhea, irrational dietary regulation, and numerous other treatments. At present we are in the midst of another period of our march toward "Perfection," namely, focal infection. Shall we accept or shall we reject it? That is the question surging in the minds of the profession to-day. Let us look at the subject from a sane point of view. Let us remember the mistakes of the past and decide whether or not we are merely in a stage of fanciful disillusionment? Let us not, however, think too strongly of the saying, "History repeats itself."

What is it that causes us to accept a method or a treatment? The answer is simple—success. Let us consider the subject of focal infection from the standpoint of its successes and failures. In this early period of its career we find that a majority of the cases have been of long standing and referred for dental observation, only after all other means have proved futile. This is quite similar to the treatment for appendicitis in the early days when the surgeon would delay operation until he elicited fluctuation.

I appeal to your sound judgment. Is it fair and just to ignore focal infection because neglected cases are not always successful? Any disease of long standing is more pernicious than a more recent infection. Even though cases of somewhat hopeless cure are referred to the dental profession, remarkable results have been obtained and symptoms greatly relieved. The common complaint of the chronic opponent to advanced ideas is that, "he has had all of his teeth out and yet he has showed no improvement." Absurd and unjust to say the least! When the streptococcus has established a lesion, in the gall bladder, heart valves, or joints, and has advanced to such a stage where it is "keeping a house all its own," it is ridiculous to expect complete relief by the mere destruction of the primary focus.

Successes on the other hand are seen constantly. Some of the firm believers in focal in-

fection refer their cases when the first symptoms are presented to them. At this stage particularly can we expect complete recovery. The results are convincing to anyone open to conviction, while the "chronic skeptics" lay the results to coincidence. Give credit where credit is due. If a case of arthritis is presented with distinct alveolar abscesses or infection, and the extraction of abscessed teeth and the cleaning up of the pyorrhea causes relief in the symptoms, what in the name of common sense did it, if the removal of the focus did not? It is poor policy to commit ourselves on certain things, that is true, but it is just as poor a policy to be backward and not admit the most obvious. It is true that radicalism is shown in this field, but use sound judgment based on clinical evidence primarily, and depend less on theory. Unless we do this, focal infection will drop into oblivion along with the fads mentioned in the beginning. It will meet its death and along with it will pass valuable advances in the development of science.

In conclusion, what we need is more and closer co-operation between the medical profession and the dental profession, such as exists in group practice. After all other treatments have failed, and you see permanency of disease established, do not expect the impossible to happen. The enthusiast must guard against promising a miracle. A middle ground must be struck whereby we are willing to lose some of our dignity by trusting in the judgment of others. Let us believe in what our eyes tell us is true. In so doing we not only benefit ourselves, but the all important individual, the patient.

SYPHILIS AT THE U. S. ARMY BASE
HOSPITAL, CAMP GREENE,
CHARLOTTE, N. C.
CLYDE F. ROSS, M.D.
RICHMOND, VIRGINIA.

AND
WALTER A. DE FOE, M.D.
DETROIT, MICHIGAN.
(Formerly Captains, M. C., U. S. Army).

In presenting this series of cases of syphilis admitted to the Genito-Urinary and Dermatological Service at the U. S. Army Base Hospital, Camp Greene, N. C., we realize very fully the many shortcomings of this presentation. From Nov. 1, 1917 to Dec. 1, 1918, there were cared for in the Hospital 458 patients, while there were 323 cases of latent syphilis sent in

from the Camp for treatment, making a total of 781 patients treated. To these 781 patients 2,797 doses of arsphenamine and 1,228 injections of mercury salicylate were administered, the average dose of arsphenamine being .547 gm.

It was the policy of the service at all times to keep in the hospital and treat all those patients having active manifestations of the disease until they were cured. For sometime it was the policy of the Camp Surgeon to have all antisyphilitic treatment administered at the Base Hospital, but owing to the distance of the hospital from the Camp it was later decided to open a Venereal Infirmary in the Camp, at which all latent syphilitics and chronic gonorrhoas were treated.

It was the intention of the Chief of the Service at the Base Hospital to give a course of six doses of arsphenamine and twelve injections of mercury, each administered at weekly intervals, then after a period of one month or six weeks without treatment, have a Wasserman Test made. If this plan could have been carried out we would have been able to report the result of the treatment; but under the later ruling of the Camp Surgeon, when the treatment was divided and the Chief of the Service at the Base Hospital had nothing to do with the patients after they left the hospital, it was impossible to follow the patients and the result of the treatment. On the other hand, the Chief of the Venereal Infirmary may have outlined a course of treatment different from the one outlined at the hospital.

The 323 cases of latent syphilis treated at the Base Hospital were sent in by the Regimental Surgeons with a Syphilitic Register showing that they had had treatment previously or else the serum reaction justified their beginning treatment.

Of the 458 cases cared for in the hospital, eleven were latent syphilitics who were in the hospital for other diseases, gave a history of syphilis and positive Wasserman and took treatment while there. Of the 447 cases of active syphilis, 189 were primary, 240 secondary, 14 tertiary and four cerebro-spinal. The few cases of tertiary syphilis differ greatly in proportion from what is seen in civil life due, of course, to the ages of the patients we were treating. There were not enough of these to draw any conclusion from, so they will not be discussed further. There were more than four cases of cerebro-spinal syphilis seen, but these were referred to the Neurologist on the Medical Service and if treated at all were treated there,

but as a rule these men were discharged without any treatment, unless it was some intravenous arsphenamine. There were also treated for the gastro-enterologist, a number of cases of syphilis of the stomach, the result of which we have no record.

During the administration of these 2,797 doses of arsphenamine, in which nearly all of the arsenical preparations furnished by the Government were used, we learned that there should be definite indications before the drug is used, for it cannot be said that its administration is without danger. In this series we had all the reactions, including one death, that one reads about in the current literature. As to the cause of these reactions, we don't think there is any one cause that will apply to 75 per cent. of the reactions. We are inclined to the belief that the greatest proportion is due to anaphylaxis, a number to the condition of the gastro-intestinal tract, and still a number to the mental condition of the patients. It was our pleasure to prepare the solution in the most approved fashion that could be obtained at that time. In the early life of the hospital, when we had none or few facilities, we'll admit we used at times sterile tap water, and we must confess that our reactions were no greater than when we used doubly distilled sterile water. The most frequent mistake we find in the preparation of the solution is that we are more liable to give a too acid solution than a too alkaline one.

PRIMARY SYPHILIS.

If syphilis is to be efficiently treated the treatment should be begun during the primary stage, and not only during the primary stage but before the Wasserman reaction has become positive. This is the ideal which we are coming more and more to obtain. In this series of 189 cases of primary syphilis cared for in the hospital, we have complete histories on 172. Of this 172 patients, 23 or 13½ per cent. were treated ideally; that is, diagnosis was made, confirmed by positive spirochete, and treatment begun before the Wasserman became positive. As the value of early diagnosis becomes more and more impressed on the profession and the laity, the more of these cases will be treated in this manner. We don't think anyone doubts that syphilis can be cured if treatment is begun before the Wasserman Reaction becomes positive, but many syphilographers doubt its being cured after this stage is reached.

The diagnosis of the primary stage of syphi-

lis is harder and gives more trouble than the other stages of syphilis. There are so many ulcers and lesions of the genitals with which syphilis can be confused, and the clinical features of the chancre are so very variable that the making of an early diagnosis is at times a task. There are lesions which an experienced man recognizes at once as syphilis, and the diagnosis which he does not hesitate to make and institute treatment even without the aid of the microscope, but there are others that so resemble the chancroid and other lesions of the genitals that he is compelled to rely solely on the laboratory for diagnosis.

It is our opinion that the profession is becoming more and more reliant upon the laboratory for the diagnosis of syphilis, with which we agree provided the laboratory diagnosis concurs with our clinical diagnosis; or, if we are undecided we are willing to let the laboratory help us decide; but we are inclined if there is a disagreement to take our clinical diagnosis in preference to the laboratory.

Volumes have been written on the clinical features of the chancre and chancres have been given all varieties of classifications, some of which sound very prosaic while others are inclined to be poetical, whereas in reality all of the classical features of the chancre have their many exceptions. Our experience has been that the getting of an accurate history in the army as to the period of incubation of primary syphilis is very unreliable. There are certain restrictions placed upon, and certain penalties imposed on, all those who contract venereal diseases in the service. Soon the more intelligent ones learn to concoct a story to suit their particular case so as to evade these impositions; and those not so intelligent, mostly negroes, can give you no definite history, so that we learned to pay very little attention to the period of incubation in forming an opinion as to whether the condition had the incubation period of a chancre or chancroid.

Induration is one of our main signs in making a diagnosis, but the exceptions to this sign are so numerous that it should be looked upon with suspicion. There was one class of cases that we recall in particular that were manifested by an indurated fissure of the margin of the prepuce. They had nearly every characteristic of the chancre, yet the spirochete remained absent and the Wasserman negative. These conditions existed in that class of men with long tight prepuces. Upon retraction of this prepuce, the margin would crack and every suc-

cessive retraction serves to increase the irritation and formation of connective tissue at this point and resultant induration. On the other hand, there is many a chancre which in the beginning, and this is the time the spirochetes are abundant and treatment should be instituted, that shows no signs of induration, just a red superficial ulcer as pliable as the skin or mucous membrane on any part of the body. In this series of cases 9 per cent. proved to be multiple, while in our 195 cases of chancroids 34 per cent. were single. So the old rule, chancres are single and chancroids are multiple, has its exceptions. Our percentage of multiple chancres is a good deal lower than the average, which was due to the fact that one of two things, or both, had to exist before we would diagnose multiple chancres; one being the clinical features of any and every ulcer leaving no doubt in our mind as to its being a chancre, and the other the presence of the spirochete pallida. The Wasserman would not help us any in this case, for the Wasserman could become as positive from one chancre as from a number.

The diagnosis chancroid on our service was made by exclusion, as we and the laboratory men with whom we have been associated believe it possible only in a very small percentage to make the diagnosis of chancroid by finding the bacillus of Ducrey. So we have diagnosed and classified all conditions chancroids which had the clinical features of chancroids and could not be classified as syphilis or other known lesions. Primary syphilis was complicated with chancroids in 13 per cent. of this series.

A suppurating inguinal adenitis in conjunction with an ulcer on the genitals does not necessarily mean that the ulcer is not luetic, for one knows that even in the Bubo complicating the chancroid that the cause of the suppuration is pyogenic infection and very seldom due to the bacillus of Ducrey. If so, why should not that same pyogenic organism enter the inguinal gland by way of the chancre as well as the chancroid and produce a suppurating adenitis.

Undoubtedly the most valuable indication of the presence of any syphilitic lesion is the spirochete pallida. There is always in our mind an error of doubt in the Wasserman reaction because of the many errors that might creep into the making of this reaction, and also that there might be other diseases with which the patient is suffering that would cause an erroneous conclusion, but the finding of the spirochete pallida on the dark field by one who

knows the pallida from the other forms of the spirochete, leaves no room for doubt. It is our impression that the dark field method is the most reliable for diagnosing the spirochete pallida from the other species of the spirochete, for here we see the spirochete in motion, and the motility is one of the most important, if not the most important, characteristic of the spirochete pallida. A negative finding means that very likely the lesion has been treated by antiseptics; that the lesion has been present a long time and instead of the spirochetes growing on the surface they have penetrated into the deeper layer of the chancre, or else that the lesion is not syphilitic. In case the lesion has been treated by antiseptics, it should be dressed in normal saline solution for 48 to 72 hours before we can hope to find the spirochete. In case the lesion is an old one, serum obtained from the deep layers of the ulcer should be examined. We have never been very successful in obtaining the spirochete from the inguinal glands by puncture. Very often the question will arise as to how many dark field examinations should be made, and the answer is an indefinite number or until the organisms are found. At times they will be located on the first examination, at others, not until the twelfth or the twentieth. The positive Wasserman is the last sign to appear in primary syphilis. This will become positive at varying intervals. We have gotten positive Wassermans three days after the appearance of the lesions, taking the patient's word for the time of appearance of the chancre.

We would hardly like to say an ulcer was positively not syphilitic, unless there were no secondaries and the Wasserman was not positive for a period of three months. The Wasserman should be performed at least once every week, and better twice. It was always our routine to confirm one positive Wasserman by another in case our clinical symptoms were very doubtful. We should never lose sight of the fact when we get a positive Wasserman that the patient may have latent syphilis and that the symptoms are not those of syphilis but of some other disease which exists at the same time as the latent syphilis. We have been forced on a number of occasions to make a diagnosis of chancroids and latent syphilis when the history was one of having had syphilis before and very likely having had treatment, but the clinical signs were those of chancroids and the examination for spirochetes was not positive.

The average length of time spent in the hospital by these primary syphilitics, which com-

prised the time consumed in making diagnosis and taking treatment until all active lesions were healed, was 22.4 days; the number of doses of arsphenamine 3, and injections of mercury, 2. The uncomplicated cases stayed only 20 days in the hospital, while those complicated with chancroids averaged 37.3 days.

The locations of the lesions were in 67 per cent. on the prepuce, 14 per cent. in the coronal sulcus, 6 per cent. on the glans penis, 5 per cent. on the shaft of the penis, 4 per cent. on the frenum of the prepuce, 2 per cent. in the meatus urinarius, and 2 per cent. on the tongue. Of the latter two were musicians and evidently contracted the disease by letting infected persons use their instruments.

It has been the opinion of one of us (Ross) gained from civil life, that the negro was more easily cured of syphilis than the white man. His Wasserman will become negative sooner, stay negative longer on less treatment than the white man's. This impression was carried in the army, and we find that 46 cases of primary syphilis, in the white man, spent an average of 28.75 days in the hospital and took 4.2 doses of arsphenamine, whereas the 126 cases of primary syphilis, in the negro, stayed in the hospital on the average of 21.3 days and took 2.44 doses of arsphenamine.

SECONDARY SYPHILIS.

The diagnosis of secondary syphilis was made from the history, which was of a great deal more value than in the primary stage because generally speaking no penalties could be imposed, the clinical manifestations, and the Wasserman reaction. The Wasserman reaction is, of course, of more value in this stage than in any other stage of syphilis, but we always considered it one manifestation of syphilis only, and still depended upon our clinical signs in helping arrive at a diagnosis. We might also say that in a number of cases, the darkfield examination was availed of for immediate confirmation of the clinical diagnosis, which was later confirmed by the Wasserman reaction. Caution should always be exercised in the use of the darkfield for the examinations of lesions of the mouth, because the mouth is the natural habitat of other species of spirochete. The Wasserman was positive in 96 per cent. of our secondary syphilitics, the other 4 per cent. were given treatment upon a diagnosis made from history and clinical manifestations, although the reaction was negative.

In the 240 cases of secondary syphilis the

mucous patch comprised 50½ per cent. of the clinical manifestations, the syphilides 19½ per cent., adenopathy 26 per cent., the condylomata 2½ per cent., and alopecia 1½ per cent. The distribution of these lesions might be of interest, 27 per cent. of the mucous patches were on the prepuce, 15 per cent. on the glans penis, 12 per cent. on the tonsils, 11 per cent. on the lips, 9 per cent. on the tongue, 8 per cent. on the cheeks, 4 per cent. on the gingiva, 4 per cent. on the scrotum, 3 per cent. in the pharynx, 3½ per cent. on the shaft of the penis, 2 per cent. on the fauces, and 1½ per cent. on the uvula.

Fifty-five per cent. of the syphilides were macular, 34 per cent. were papular, 6 per cent. were pustular, 3 per cent. were annular or circinate on the face, and 2 per cent. were erythematous.

Of the condylomata 44 per cent. were around the anus, 33 per cent. on the prepuce, 12 per cent. in the coronal sulcus, and 11 per cent. on the scrotum.

Of the adenopathies, 71 per cent. were general while in 29 per cent. were the inguinals alone involved.

The average length of time spent in the hospital by these 240 cases of secondary syphilis, which included time occupied in arriving at diagnosis and administering treatment until all active lesions had healed was 15.96 days, the average number of doses of arsphenamine was 2.5 and injections of mercury 2. The secondary lesions were more superficial and consequently healed more readily than the lesions of primary syphilis. Again the diagnosis was more easily made, and not so much time consumed in this manner.

SUMMARY.

No one sign, either laboratory or clinical, should be depended upon for the diagnosis of syphilis, but the laboratory and clinical signs should be closely examined and conclusions reached by a study of all the information available, never forgetting that the diagnosis of syphilis was made long before the advent of the Wasserman.

The ideal time to begin treatment in syphilis is before the appearance of the positive Wasserman during the primary stage. This should be our aim in our future relations to the treatment of this disease.

Nine per cent. of our chancres were multiple while thirteen per cent. were of the mixed variety; that is, both chancres and chancroids were present.

Primary syphilis can be diagnosed and all active lesions healed in twenty days, with an average administration of three doses of arsphe-
namine and two injections of mercury.

Secondary syphilis can be diagnosed and all active lesions healed in sixteen days, and with two and a half doses of arsphenamine and two injections of mercury.

The administration of arsphenamine is not without danger and it should not be administered except when indicated, which indication is the existence of syphilis, active or latent, and then only under the best conditions possible, and by one who can meet any emergency that may arise.

The negro is more amenable to treatment than the white man, as shown by the comparative length of time spent in the hospital by the two classes of patients.

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SURGERY OF THE SUPRASPINATUS MUSCLE.

A. S. KITCHEN, M.D.

ESCANABA, MICH.

For some two or three years past I have come to regard the supraspinatus muscle with



CASE II.

considerable respect. Of some one hundred injuries to the shoulder where X-ray plates have been used for diagnosis, I have found the insertion of this muscle torn out in about ten cases,



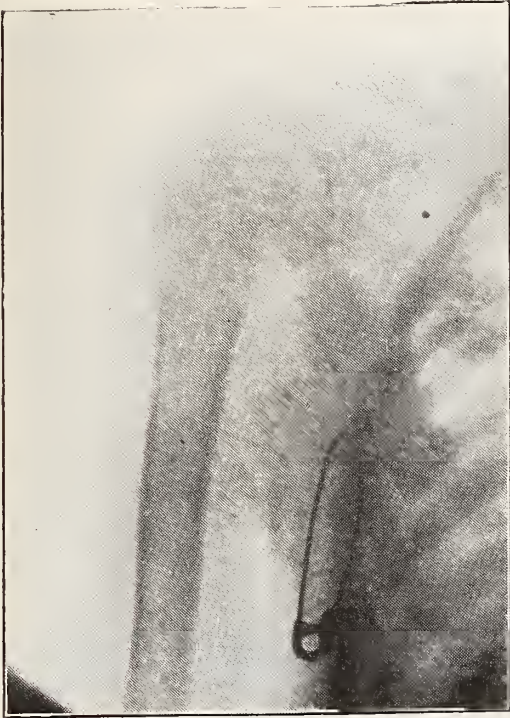
CASE I. Separation of supraspinatus insertion.



CASE III.

as indicated by the separation of the topmost portion of the greater tuberosity of the humerus.

My attention to this injury was first drawn in the case of a mechanic, who while intoxicated,



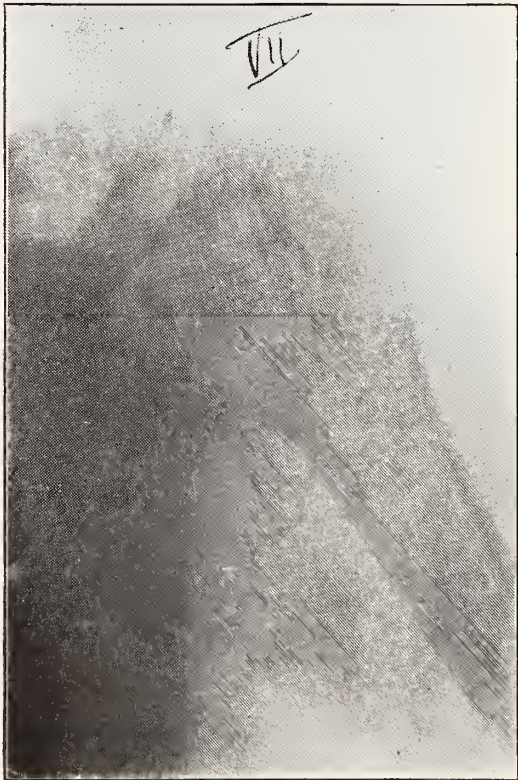
CASE IV.



CASE VI.



CASE V. Dislocation and separation of supraspinatus insertion.



CASE VII.

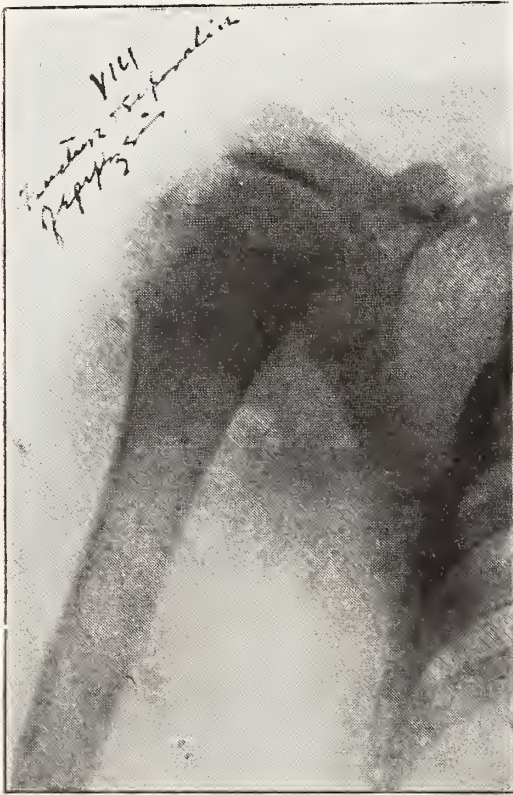
and being in some restraint, had torn out the insertion of this muscle by trying to shake off his well intentioned supporter by an outward and upward thrust of his elbow. He had suffered so painfully from this injury for two

months that he finally decided on an X-ray. He had treated with a physician at first, and later had taken, from an osteopath, severe massage treatments with vigorous manipulation of the shoulder, with naturally very painful and

location showed this complication to which only a casual reference was made.

Now when one considers the painful and prolonged disability that results from this minor injury and the frequent neglect and often pernicious treatment of these cases, one must naturally protest against their not having their fair share of publicity. In my opinion this muscle is one of the most important muscles of the shoulder joint.

In my cases of dislocation of the shoulder (which according to Keen constitute about 50 per cent. of all dislocations), the separation of the insertion of the supraspinatus occurred in one-half of the cases. When one comes to study the anatomy of the shoulder this looks reasonable enough because if the supraspinatus hung on hard enough the head of the humerus could hardly slip down enough to get out of the glenoid cavity. The tendon of the supraspinatus hooking under the horn of the spine of the scapula and under the acromio-clavicular ligament runs over a sort of steadying, pulley-



CASE VIII. Fracture and separation of epiphysis.

disappointing results. As he was an expert plumber he was quite incapacitated and consequently was losing the proverbial plumber's fortune during his disability.

The outward appearance of the shoulder was negative and manipulation showed nothing abnormal in the way of crepitus, but the pain was very severe in elevating the elbow to the horizontal. X-ray showed the separation of the attachment of the supraspinatus to the greater tuberosity.

The second case, of some months standing also, came to me within a week or two and resulted from, as she described, "her daughter snatching a towel from her hand from behind," while her arm and forearm hung perpendicular along the body.

A third case happened within six months and by this time I came to the conclusion that these cases were quite more frequent than indicated in the textbooks. On consultation with Bryant & Buck I found four lines of information; Keen has one line and a half. Strange to say the only X-ray plates illustrated on shoulder dis-



CASE IX. Dislocation and separation of supraspinatus insertion.

resisting rotation forward or backward, and is inserted into the topmost facet of the greater tuberosity of the humerus, practically the pivotal point in this most important bone in the most important joint of the human body.

Not only this but it crosses beside the long-head of the biceps as it comes out of the synovial lined sheath in the bicipital groove on its way to its insertion in the upper edge of the glenoid cavity. These two tendons pass each other very closely and are very intimately connected with the capsule of the joint and play a decidedly intricate function in the finer and more delicate movements, such as in swimming and in baseball.

I think most of the pain in connection with separation of the insertion of the supraspinatus is due to the irritation of the synovial sheath of the biceps tendon and not due to impinging the fragment against the acromio-clavicular ligament, and consequently persistent massage and even the light use of the arm in ordinary duties, tend to keep up a painful tenosynovitis and prolong disability.

It would be interesting to show plates and go further into the anatomy of these cases but time will not allow and anyone can easily get a collection of cases of his own if he will resort to the X-ray as a routine in all injuries to the shoulder.

A REFINED TECHNIC IN INTESTINAL DRAINAGE (ENTEROTOMY) FOR INTESTINAL OBSTRUCTION.

HENRY J. VANDEN BERG, M.D.

GRAND RAPIDS, MICH.

Intestinal obstruction has always been regarded as a very serious surgical condition because it carries with it a high mortality; but less so (according to Traves 50 per cent.) since it became a custom to evacuate the intestinal contents.

Simply relieving the obstruction, and allowing the highly infectious and toxic fluid that has accumulated to pass down into the healthy and thirsty distal intestine, is too often overwhelming to the patient.

The exact nature and origin of the toxins developed is, I believe, not yet definitely known; but whatever it may be, the value of drainage as a life saving measure is now regarded as a fundamental principle in surgery that must be observed but is not always carried out.

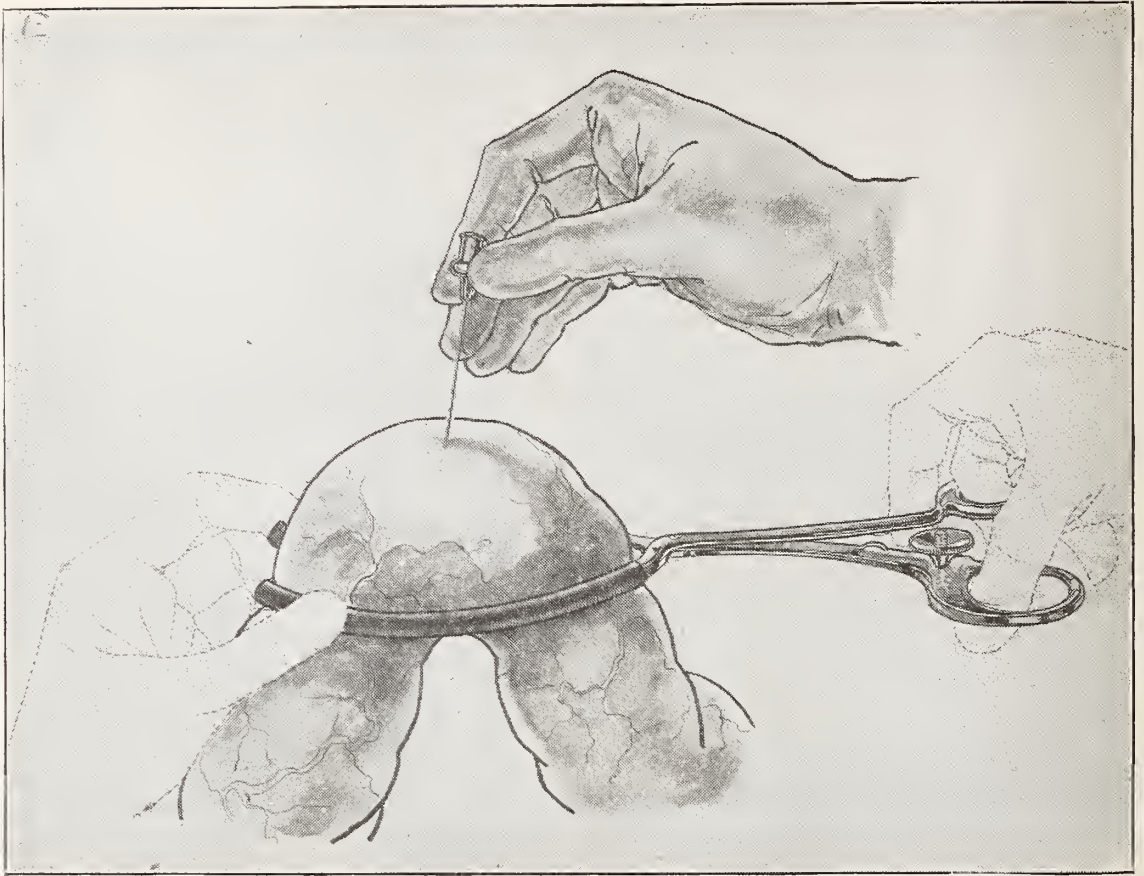
A few years ago I saw a case of obstruction of only eight hours standing involving a loop of small intestine that was caught under a post-inflammatory band. The operation was most simple, only the band being divided to release the obstructed knuckle of gut. The bowel was

not evacuated in this case. The patient died in a few hours. I believe drainage would have saved the life of the patient.

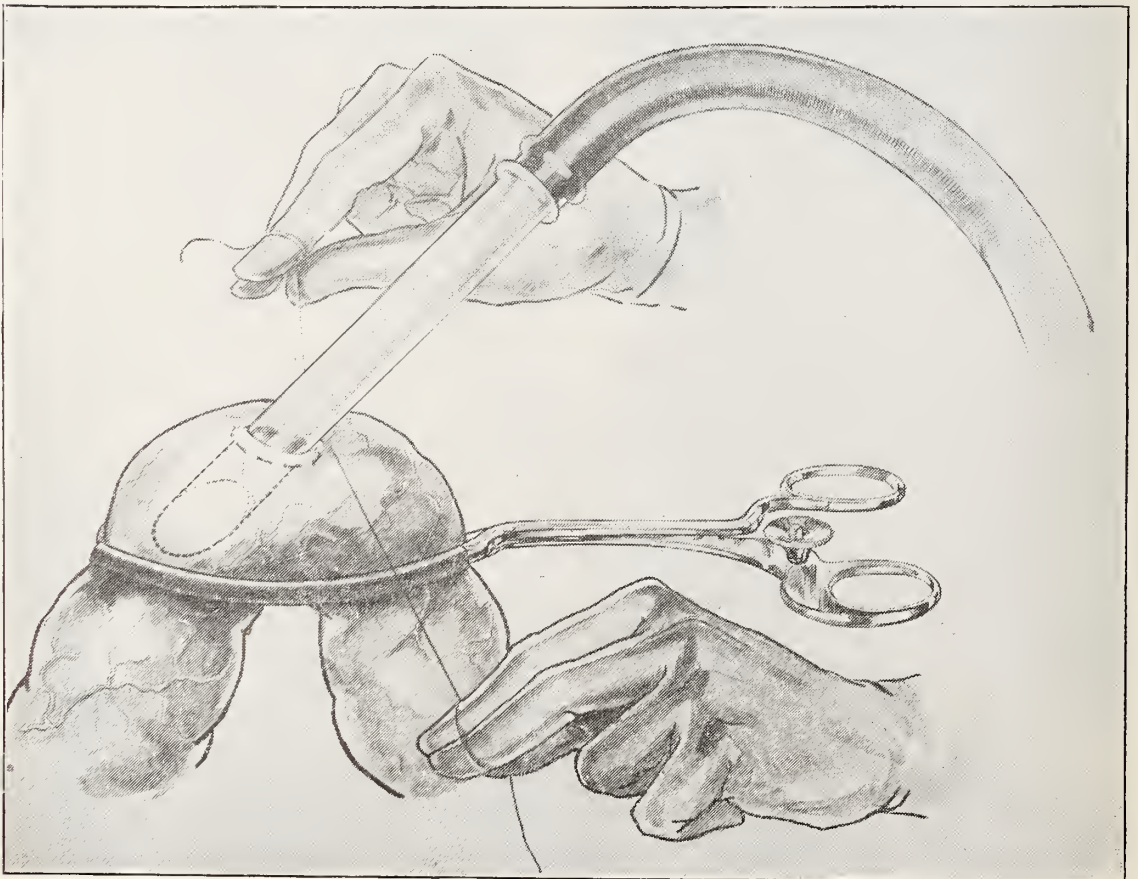
From a therapeutic point of view, then, a very important consideration in obstruction is drainage (and gastric lavage if there is regurgitation), and a technic that is simple in its application and in which all soiling is prevented. The methods are naturally numerous and varied.

We have used the trochar and purse-string suture, and so far as the matter of soiling is concerned this is a very satisfactory method; but on account of the small calibre of the trochar several punctures have to be made and then the emptying is not complete enough. Moynihan's technic is today, I believe, most generally used. He devised a glass tube about 8 inches in length and about $\frac{3}{8}$ of an inch in diameter, which is introduced into the lumen of the gut thru a longitudinal incision about an inch in length. The bowel is then pushed gently along the tube, as illustrated in Fig. B. "The tube and gut are then seized in a wrap of sterile gauze and held firmly by an assistant so that no leakage occurs by the side of the tube." We used his tube and technic but in our experience it was not possible, in all cases at least, to prevent soiling. "Holding the tube and gut firmly with a wrap of gauze and so prevent soiling" is easier said than done, because the gut is usually quite markedly distended with fluid and gas, and the moment an opening is made the gas which is held under considerable tension tends to escape, and in so doing is apt to carry with it some of the infected fluid. The patient is already carrying a hazardous load and peritonitis of no degree must be superimposed. Prompted by the advantage of Moynihan's tube because of its drainage qualities, we have modified his technic so that it can be accomplished without any soiling.

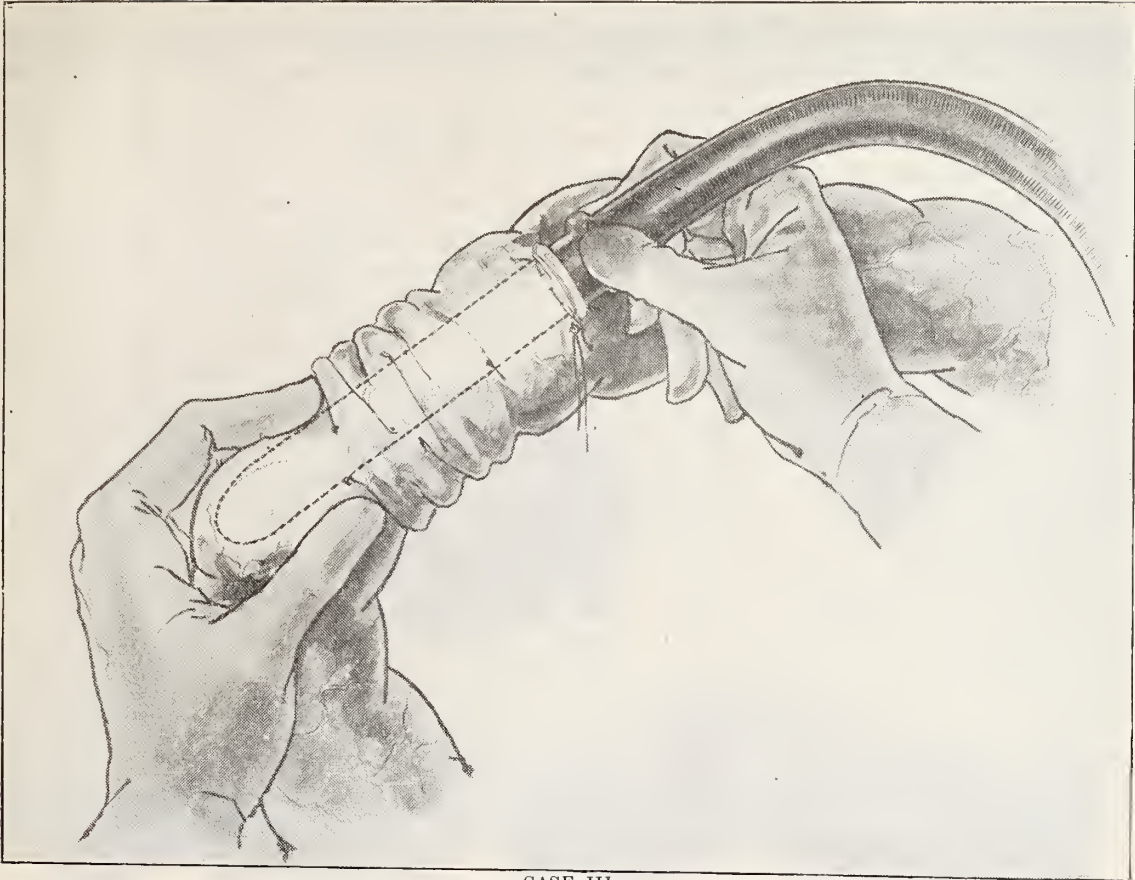
We first of all collapse a knuckle of gut by letting out the gas thru a hypodermic needle, Fig. I., and then with the fingers strip down on the gut to empty it of its fluid contents. This latter procedure is less important than the former. The collapsed loop is then grasped with a rubber tubing covered forceps to prevent any rushing out of any of the gut contents. A purse-string suture is then stitched in the wall opposite the mesentery, and a longitudinal opening made just large enough to admit the tube, Fig. II. As soon as the tube has been introduced beyond the tip the purse-string is



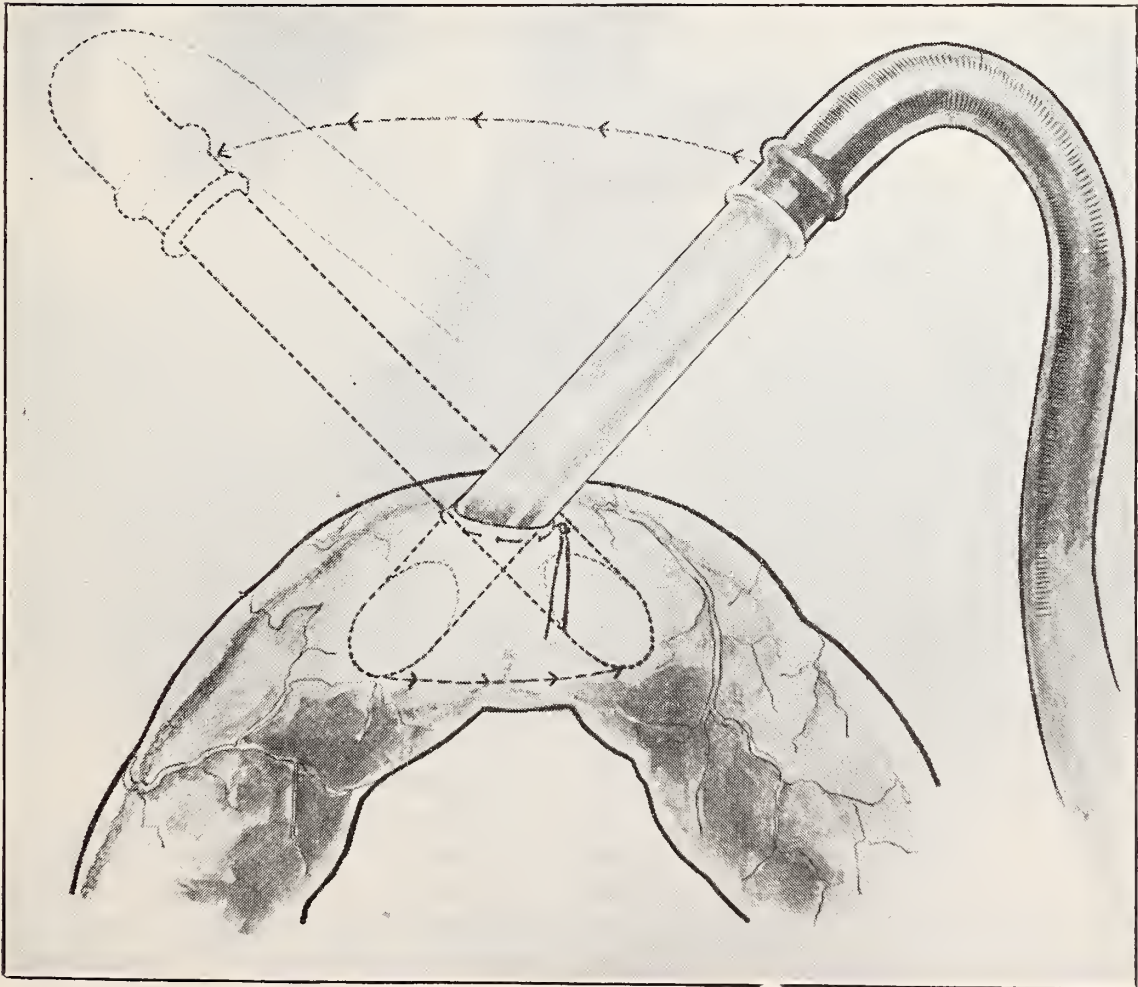
CASE I.



CASE II.



CASE III.



CASE IV.

pulled up by the assistant and the clamp is removed. The tube is then pushed up into the gut up to the flange, and then as much of the gut as possible is pushed onto the tube, Fig. III. This procedure is repeated in the opposite directions, as illustrated in Fig. IV. In acute cases several feet of intestine can be negotiated in this way: in chronic obstruction with hyper-

ture the assistant holds on to the purse-string, in order that it may not loosen with resulting escape of intestinal contents. In withdrawing the tube special attention must be given to lowering the drainage mechanism so that the tip forms the highest point while the purse-string is being drawn down over it. Fig. V. The object of this is that any fluid left in the



CASE V.

trophied walls obviously much less. If there is still unloaded gut that cannot be pushed onto the tube, the gut can sometimes be held up and its contents allowed to run out. In doing this, care must be exercised not to pull on the mesentery. We are now using a tube nine (9) inches in length with a half ($\frac{1}{2}$) inch lumen, which has a distinct advantage in negotiating more gut. It now is seldom necessary to make more than one opening.

Throughout the drainage part of the proce-

ture the assistant holds on to the purse-string, in order that it may not loosen with resulting escape of intestinal contents. In withdrawing the tube special attention must be given to lowering the drainage mechanism so that the tip forms the highest point while the purse-string is being drawn down over it. Fig. V. The object of this is that any fluid left in the

tube may gravitate away from the bowel. The free edges are carefully wiped with a sponge and alcohol applied. Then it is reinforced with a running suture in the transverse direction. The gut wall can be so thin from overdistention that it is almost technically impossible to do either an enterotomy or enterostomy, but where it is desirable and possible to do an enterotomy I recommend the technic as here described and illustrated.

ETIOLOGY OF ORGANIC HEART DISEASE.

M. A. MORTENSEN, M.D.

The progress of medicine has been one of evolution out of ages of tradition. In medicine, as in other sciences, tradition wields an almost everlasting influence. Superstitious beliefs of bygone ages still cling to the laity, and may we not ask ourselves if we are entirely free? Are we not inclined to believe without reason, and accept statements coming from high authority without sufficient proof? This applies to the history of heart diseases as much as to that of any branch of medicine.

Since the early days of medicine, heart disease was an acknowledged fact, but in its evolution Harvey in 1619 must be given the credit of putting the subject on a stable basis when he announced the discovery of the circulation. He made physiology the foundation on which further observation rested. Galen had referred to heart disease, basing it on his studies of anatomy, noting pericardial exudates and polyps as deviations from the normal. In the first half of the eighteenth century, Valsalva, Vieussens, Lancisi, Senac and Morgagni deserve special mention for their studies in anatomy and diseases of the heart.

More than a hundred years ago, Corvisart defined organic lesions as "every species of alteration which occurred in the texture of the solid parts, whose determinate concurrence and arrangement are requisite to form an organ and to establish its action and duration." Not many of us would attempt to add to this definition. He also called attention to the fact that "The muscular substance is what most essentially constitutes the central organ of circulation, acting the principal part in its organization, since to the contractility of the muscular fibres the motions are entirely indebted, which give impulse to the fluid which the heart causes to circulate."

These are fundamental facts that every one of us must bear in mind in our consideration of every case suffering with heart disease, and our success will depend on our ability to recognize the damage done to the heart as a tissue, and the resulting impairment of function.

The greatest work that we, as medical men, can perform for the human family is that of prevention of disease, and if you look at the mortality cases for organic diseases of the heart we cannot help but see the great necessity of

concerted effort in this direction. To do our best here, it is essential that we thoroughly understand the etiology of these diseases. We have all witnessed satisfactory decline in mortality rates in tuberculosis, typhoid fever, diarrhoeal diseases of infancy, all because the etiological factors were clearly understood. The next step was the general education of the public, teaching them the cause and what they must do to inhibit the spread of the disease. Tuberculosis clinics and antituberculosis campaigns have been carried on everywhere with good results and still better results to come. Boards of Health everywhere warn people about the dangers of typhoid from drinking water, and proper sanitary regulations are carried out everywhere to prevent water and milk contamination, with the best of results. Along this same line, should we not consider the organizing of cardiac clinics in our cities for a two-fold purpose, viz; to teach those already afflicted what to do to postpone as long as possible cardiac decompensation, and at the same time remove possible foci of infection that may continue a menace to the myocardium, and secondly, to arouse an interest by the laity as well as the profession in the types of infections that are a menace to the heart.

In New York City, cardiac clinics have been established for the prevention of heart disease and the proper education of those already afflicted. The results justify the continuation of such clinics and with the co-operation of the general practitioner the benefits will show a decline of the mortality rate from organic heart disease.

MORTALITY.

Mortality statistics for 1915 show a steady decline since 1900 in the occurrence of tuberculosis and typhoid fever in the registration area of the United States, but this has not been the case with organic heart diseases. From Mortality Statistics for 1915, I quote "Organic diseases of the heart caused more deaths (99,053) in the registration area in 1915 than any other single cause, even exceeding the number due to all forms of tuberculosis (98,194). The deaths charged to organic heart diseases in 1914 numbered 93,588. The rate from this cause in 1915 was 147.1 per hundred thousand population, as against 141.8 in the proceeding years and 111.2 in 1900. The increase in the mortality from organic disease since 1900 is the more noteworthy in view of the decline in the rates from tuberculosis of the lungs and

pneumonia (all forms) and the smaller increase in that from Bright's disease and nephritis."

Is it not possible that we are too optimistic in our conclusions in many cases presenting abnormal heart action. We have all observed cases with apparent evidence of organic lesions that have experienced no subjective cardiac discomfort over a period of many years, and because of these observations, we are prone to think certain evidences of lesions have little or no influence on prognosis. According to Fisk, insurance statistics in supposedly types of so-called valvular murmurs show an extra mortality ranging from 50 to 100 per cent. Even the so-called functional murmurs, or murmurs not classified as characteristic of valvular lesions have an extra mortality of 50 per cent. In the experience of forty-three Life Insurance Companies, a persistently irregular pulse showed an extra mortality of 50 per cent. in lives accepted on standard policies. It is perhaps true that statistics are not always to be accepted as proof, but, as a rule, they may be relied upon to show the trend, and here the margin is so large that they must be accepted as evidence showing that some of the so called harmless cardiac symptoms undoubtedly influence the cardiac efficiency, and through it, the length of life.

These facts emphasize the great necessity of using the utmost care in judging the efficiency of the myocardium, the keystone to the circulation, and on our skill will depend our success in the prevention of untimely deaths in cases showing evidence of abnormal heart action.

ETIOLOGY.

Organic heart lesions are mostly acquired, a few being of congenital origin. The acquired lesions involve the pericardium, endocardium and myocardium, and their importance depends entirely on the extent of their influence on the efficiency of the heart muscle. The evolution of our knowledge of heart disease shows very clearly that the etiological factor of first importance is some infection. Ever since organic lesions have been recognized, acute inflammatory rheumatism has been associated with heart disease by all prominent writers, with the endocardium the point of attack. Bouillaud was the first to use the term endocardium, and has the credit of first associating disease of the endocardium, including the valves, with acute inflammatory rheumatism, and emphasizing the frequency of endocarditis in poorly managed cases of rheumatic fever. He also noted that all signs of rheumatic disease might disappear

but evidence of the endocarditis persisted. Corvisart, Bamburger, Latham and Stokes all confirmed these observations and also recognized rheumatic fever as an etiological factor in pericarditis and myocarditis. Austin Flint refers to a series of 474 cases of acute inflammatory rheumatism, analyzed by Fuller, and found endocarditis existed in 214, a ratio of 1 to 2.25. Early writers also refer to exposure to cold, trauma, severe physical exertion, tuberculosis, pneumonia, pleurisy, pyaemia, puerperal fever, scarlet fever, measles, diphtheria, caries of ribs, bronchial abscess or ulcer, perforating ulcers or carcinoma of esophagus or stomach, hepatic or splenic abscesses, as possible causes of organic heart disease.

Association of throat inflammation with organic heart disease was not definitely referred to as an etiological factor until towards the latter part of the last century. Caton in 1900 reports eighty-six cases of rheumatic fever, in which he notes exposure to wet and cold as the most important fore-runner of rheumatic fever and heart disease, mentioning it in thirty-two cases, while he refers to tonsillitis or a severe cold in six cases and chorea in five cases. In recent years avalanche after avalanche of evidence has been that nearly all cases of valvular heart disease involving the mitral valves, and particularly stenosis give a clear history of throat infections in form of tonsillitis or quinsy, some followed by rheumatic fever. In a series of 400 mitral lesions a history of throat infections, inflammatory rheumatism or other streptococcic infections were given in 305 cases.

The acute throat infection, rheumatic fever, scarlet fever, diphtheria, typhoid fever, pneumonia and pleurisy and other septic infections result in myocarditis as well as endocarditis. Christian of Boston has recently reported sixteen cases of acute pericarditis following rheumatic fever in which five and possibly a sixth developed a heart block, proving an involvement of the conducting system of the myocardium. Postmortems have frequently revealed more or less extensive myocarditis with or without endocarditis following acute infections, this being particularly true of diphtheria, typhoid fever and pneumonia.

If we could devise some means or method by which we could eradicate or materially decrease the frequency of throat infections in the young, we would do much towards decreasing the frequency of endocarditis and resulting valvular diseases. I think we are prone to consider

throat infections as a purely local disease, forgetting the possibilities of an endocarditis. Any child with a predisposition to repeated tonsillitis should be seriously studied and tonsillectomy urged if tonsillar crypts become foci of infection.

Typical myocarditis is most common in the latter decades of life, being particularly common in those suffering with old valvular lesions of rather severe grade, with or without arteriosclerosis. The sclerosis is especially productive of myocarditis where the aorta is extensively involved, including the coronaries and interfering with nutrition of the myocardium. The early detection of the hypertension is of great value in these cases, because if a cause can be found, it is more than likely it has a direct influence on the myocardium. In some, an angina symptom complex is the first suspicion of heart disease, and this may occur with or without hypertension. If the arteries are like pipe-stems, or beaded, then we have a right to suppose that we have a coronary sclerosis, but if not, and blood pressure is not increased, then we must look for causes liable to produce a localized arteritis or coronary spasm. Here a focal infection with resulting toxine is to be expected, and the tonsils with infected crypts, apical abscesses of teeth, sinusitis, are to be suspected, or possibly chronic appendicitis, diseased gallbladder or prostate. In any case of this nature, a most diligent search must be made for any and all possible sources of infection. Within the last year, I have had a number of cases where the elimination of chronic foci of infection in teeth, tonsils or sinuses have resulted in wonderful relief from symptoms of myocardial disease. Two cases with all the classical subjective symptoms of angina pectoris were entirely relieved by the removal of infected teeth.

Obesity with its resulting fatty infiltration is an important cause of myocardial insufficiency, and in some cases, it may be a factor in causing symptoms of angina. A case of this kind came under my care unable to walk a block without having to stop and rest because of precordial pain radiating into the neck and arm. With careful reduction of weight of about twenty pounds and simple laxative diet, much greater freedom in walking was experienced, and now, about four years later, with a total reduction of forty pounds is able to walk twenty miles a day without the least cardiac distress. These experiences emphasize the importance of carefully studying every case of myocarditis

with or without angina, and not put them all in the down and out class, proscribing all form of exercise.

In 1857 Banberger referred to syphilis as a cause of myocarditis. In spite of this, it is only in recent years that we have generally classed it as an etiological factor, and Dr. Warthin deserves much credit for his researches, enabling him to present the evidence in such a vivid way as he has done the last few years. He has shown that syphilis is a very common infection in the heart muscle. The symptoms of early myocardial infection are very vague, and is it not possible that in many of the obscure cases of heart trouble that we are inclined to consider functional, such as tachycardia, premature beats, and so-called irritable hearts, we have a syphilitic infection, possibly of congenital origin, or perhaps a streptococcic infection the history of which cannot be obtained.

It is my experience that a possible cause for these obscure symptoms may be found if we take sufficient time to get a careful history of the patient's various infections.

Renal disease, particularly the interstitial type and goitre with hyperthyroidism have a profound effect on the myocardium, resulting in extreme degrees of hypertrophy which sooner or later leads to varying degrees of degeneration, often with fatal consequences. Just how these diseases produce such profound effect on the myocardium is still a disputed question, but it is reasonable to suppose that there are two factors, namely, a toxemia, concomitant with the diseases, that affects the heart and circulation in general and an increase in the amount of work demanded of the myocardium.

Physical overexertion results in changes in both valves and myocardium. Sudden and extreme exertion may result in a rupture of valve leaflets or an acute dilatation, while exertion more prolonged in nature results in marked hypertrophy which later in life is apt to undergo various forms of degeneration.

In closing, I would emphasize the importance of a careful investigation of the history of infections as well as the study of the function of the myocardium as evidenced by the daily experience of the patient. This applies to children as well as adults. We have been too prone to depend on the physical findings alone in judging cardiac conditions, and when we realize that all possible factors must be studied, we will better understand the management of organic heart lesions.

WHY THE PAIN OF PEPTIC ULCER IS BEST ACCOUNTED FOR BY THE CORROSION OF GASTRIC JUICE RATHER THAN BY HUNGER CONTRACTIONS AND HYPER-TONUS.

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During the last four years physiologists, throughout the country, stimulated by the work of Pawlaw and Cannon, have been experimenting constantly with problems of gastric motility. By means of rubber balloons and tubes placed in the stomach and attached to recording drums, the number and pressure of gastric contractions have been recorded very accurately during the hunger phase and the digestive phase. Carlson and Hardt have done the most work. Certain clinicians, viz., Smithies and Hamburger, have added to the pathological and therapeutic data on the subject.

Stated briefly, the results of these recent experiments have created a greater clamor in favor of overthrowing the old theory of ulcer pain by assuming that the corrosive peptic juice (hydrochloric acid and pepsin) does not eat into the open ulcer causing pain and accompanying spastic contraction. They say the pain is due to deep contractions of the stomach wall itself and to a strong hyper-tonus. They advise correction of this by giving belladonnae, carbohydrates and warm fluids in small quantities. They give us nothing new when they state that carbohydrate foods leave the stomach more quickly than proteids and fats; that the contraction waves influenced by carbohydrate foods are much weaker and less tonic than with other foods; that because carbohydrate foods empty more quickly, the stomach obtains rest more quickly; that acids, too, pour out in lesser quantity; and that the peptic ferment is of lesser concentration. These same adherents of the carbohydrate diet, however, forget that the normal human body requires from 75 to 125 grams of protein foods daily to maintain its basal metabolism. In examining more carefully the carbohydrate diets which they have standardized for ulcer treatment and which they have based on the above hyper-tonus theory, you will find that protein foods are added rapidly after the third and fourth weeks of ulcer management. Certainly the ulcers are not cured in this brief time, and if not, this type of management is illogical and open to grave criticism. Any medical management

which is not rigidly carried out for a period of eight to twelve months may fail because most chronic ulcers will not heal sooner than that time. Because the symptoms disappear it cannot be said that the ulcer is cured. Usually the crater of the ulcer has only been filled in with soft granulation tissue which may be broken down in a few weeks or months after returning to a normal diet. This type of case is called a re-currence and is charged to the internist as a medical failure.

Any good posterior gastric-enterostomy is better than these short inaccurate medical managements because it is permanent in its effect on the ulcer, and it allows few returns of symptoms whether or not the ulcer heals in two months or two years after the operation.

To believe in the corrosion theory as regards the pain and delayed healing of ulcer, it is not necessary to believe that peptic juice corrosion causes the ulcer. It means only that once an ulcer is present the corrosion causes pain and spasm and prevents healing, such as would occur if the ulcer were situated elsewhere in the body and continually irritated. Peptic ulcers are caused by devitalization of a localized area in the gastric mucosa, which may be toxic, bacteriologic, triphic traumatic or thermic—and only after this local accident occurs does corrosion take place, with its consequent pain.

The Leube, Ziemssen, Lenhartz and Einhorn treatments for ulcer are all based on the corrosion theory, *partially* controlling the corrosion. The gastro-enterostomy operation is also based on this theory, and it matters not whether you argue the success of this operation as due to the drainage of corrosive juices and stagnated-foods, or to the neutralizing effect of bile, pancreatic juice, intestinal juice, or stomach mucus.

With these preliminary remarks in mind, I wish to state briefly my reasons for believing in the corrosion theory.

IN SUPPORT OF THE CORROSION THEORY VS. HYPER-TONUS.

Because pepsin in presence of a free acid will dissolve proteins, such as fibrin, beef-steak and coagulated egg white. So why will it not digest a devitalized area of the stomach wall itself? (Pepsin is inert in a neutral or alkaline media).

Because in the dead body, the hydrochloric acid and pepsin remaining in the stomach at the time of death will cause softening or gastromalacia in the dependent portion of the stomach wall.

Because in bleeding peptic ulcers (in stomach or duodenum) all the pain disappears as soon as placed on a management in which the free hydrochloric acid is completely combined by alkalies or albuminous foods. The bleeding ceases entirely after ten to fourteen days if the ulcer is uncomplicated, and usually on the second or third day.

Because the very shape of most peptic ulcers (small, round, oval and punched-out) speak for some sort of corrosion.

Because of the fact that many atypical (painless) ulcers are only pea size and yet perforate. This speaks for corrosion, since hunger contractions and digestive contractions with consequent increase on intra-gastric pressure were surely there and yet produced no pain before perforation. Corrosion and perforation could easily occur under these conditions providing exposed nerves were not in the path of corrosion.

Because the pain of peptic ulcer may be made to disappear completely even though doubling the intra-gastric pressure (with tartaric acid and soda or by air inflation), providing the free hydro-chloric acid is neutralized.

Because a duodenal ulcer pain is not affected by the intra-gastric pressure of hyper-tonus and yet is relieved by alkalies, albuminous foods, and removal of the corrosive gastric juice by means of the stomach tube.

Because the position of a peptic ulcer can frequently be diagnosed (and confirmed at operation) on history alone. The dorsal position may relieve the anterior wall ulcer and the ventral position may relieve the posterior wall ulcer.

Because the pain in the cardiac end of the stomach ceases within a few minutes after its appearance, while the outlet ulcer pain persists until the entire meal has left the stomach (due to continuous bathing of ulcer in corrosive peptic juice).

Because in peptic ulcers giving positive roentgenologic signs (niche or accessory pocket) these signs, usually disappear entirely within fourteen days time if the entire acid output of the stomach has been neutralized or combined each day and night.

Because in a perforated ulcer the pain does not cease with the sudden release of the intra-gastric tension, even though the stomach remains flaccid because of resulting paresis.

Because with three to seven days of starvation in which no gastric juice bathes the ulcer and during which time there are repeated hunger

contractions and marked hyper-tonus no ulcer pain occurs unless there is present the complication of continued secretion.

Because of the frequent occurrence of jejunal ulcers opposite the gastro-enterostomy opening at the point where the acid gastric juice spurts against it. The pain of jejunal ulcer occurs from one to three hours after meals (the regular corrosion time) and yet the ulcer is extra-gastric and not effected by its contractions and hyper-tonus.

Lesser arguments are that Leub's and Lenz's management with 70 to 75 per cent. cures, are founded on this theory of peptic corrosion, and they have stood unchanged for several decades. Even the success of gastro-enterostomy is credited largely to the alkalizing effect of bile and pancreatic juice rather than to direct drainage.

Even granting that contraction waves of the stomach, with greatly increased intra-gastric pressure, cause peptic ulcer pain, why is it not just as reasonable to explain the pain by saying that the contractions and increased pressure resulted from the acid corrosion irritating the ulcer?

What is this intro-gastric pressure which we are talking about? Von Pfungen found it from 19 cm. H₂O at the cardia to 162 cm. H₂O at the pylorus. Cannon found from 6 to 8 cm. H₂O at the cardia and 38 to 60 cm. H₂O at the pylorus, though as a rule ranging from 20 to 30 cm. (adult average).

The pain of ulcer may be entirely different from the usual classical pain when the peritoneal covering of the stomach has been penetrated or when the stomach has become adherent to other organs like the gall-bladder, liver, pancreas, etc.

INVERSION OF UTERUS.

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Probably the most unique definition to be found for this anomaly would be that it is *when* the uterus is upside down and inside out. That is, the fundus uteri becomes the lowest and the cervix the highest part of the organ and the external surface becomes the internal.

Frequency: Jardine (1) for the Glasgow Maternity Hospital, found that it occurred three times in 51,290 cases. Winckel (2) had not seen a complete inversion in 20,000, nor Braun (3) a single one in 250,000 cases. Den-

ham (4) had seen one inversion at the Rotunda Hospital, Dublin, in 100,000 cases.

At the Petrograd Lying in Hospital, one of the largest of its kind in all Europe, Beckman (5) had not seen a single case in 250,000 deliveries, while Madden (6) had observed it but once in 190,000 labors in Dublin. W. C. Jones (7) after a study of collecting figures shows an average of one case in 127,767.

Records as shown from the maternities of Detroit Institutions, or those from whom any records could be obtained, shows the following:

Grace Hospital show that they have had 4,247 confinements in the last 28 years, with one case of complete inversion.

Harper Hospital in the last three years has had 2,100 obstetrical cases with no inversions.

Woman's Hospital has had 8,600 confinements with no inversions.

Providence Hospital has had since 1909, 7,200 confinements, with no case of inversion occurring in this series. One case, however, of complete inversion was brought into the service after the patient had been confined at home.

With relation to the foregoing statistics, it is evident that they have been collected from large maternity clinics and that they are valuable as far as they go, but do not indicate in any way the frequency with which inversion may have occurred in women who are confined at their homes. The majority of these large clinics are so organized that the best possible technic is in effect and all assistants in these clinics are subject to orders from the heads of their departments, and we would therefore expect a far greater number of inversions among those treated individually in their own homes and by men who are either ignorant or careless of proper prophylactic measures for its prevention. It is therefore impossible to obtain true statistics in this latter class, inasmuch as the greater proportion of physicians make no reports of them and indeed make no personal case records at all, and so while Jones in his study of collected figures shows but one case in 128,767, this cannot be any criterion of inversion found in private practice. Kehrer (8) places the frequency of all cases as one in 2,000 which indeed seems to me in a general way to tally more perfectly with what we might expect.

VARIETIES.

Inversion of the uterus are of three varieties according to the degree of displacement.

1st. Consisting in a simple dipping in or a cupping of the fundus.

2nd. Where the fundus descends below the os uteri.

3rd. Consisting in a complete descensus through the os and vagina with the whole fundus visible outside the vulva.

This latter condition may be so exaggerated that the vagina is partly inverted and the uterus dragging down the tubes and ovaries making a complete uterine inversion with prolapse.

ETIOLOGY.

Two or three factors are necessary for the production of this phenomenon, pressure from above, traction from below, together with a localized atony or thinness of the uterine walls. Some of the exciting causes are the implantation of the placenta at the fundus, submucous fibroids which have become pedunculated during pregnancy and manual extraction of the placenta. The latter has been known to be an exciting factor in several instances, probably due to the negative pressure set up by removal of the hand in utero, together with the thinned fundal area, assisted by pressure from the hand above. Simply the weight of a large placenta attached at the fundus may be an exciting factor when associated with a marked uterine atony, for in this instance the fundus assumes a cup-shaped appearance and as it descends it becomes a foreign body; in the process of time the remaining portion of the organ becomes active in its contraction and endeavors to expel this depressed portion exactly in the same way and for the same cause that it has formerly done to expel the child.

Exceptional instances of spontaneous inversion have occurred as a result of intra-abdominal pressure; other causes are those of the mother giving birth while in a standing position; short umbilical cord or the cord twisted about the child's neck or body; hard coughing, sneezing, etc., at the end of long wearisome labors.

The two most important causes recorded in order of their frequency, we have purposely placed last in this series (1st) too early adoption of the Crede method, together with its improper use (2nd) traction upon the cord as a means for the detachment of the placenta or a combination of the two, traction from below and compression from above simultaneously.

We cannot escape the view that the greater majority of inversions are due to faulty technic. There are those rare instances in which inversion occurs two or three days after delivery has been made by competent well trained obstetri-

cians, but these are few and we are not interested in that class, but in the ninety and nine which are directly traceable to poor technic at the time of delivery.

J. M. Monro-Kerr (9) Glasgow, states that in making a review of English and Continental literature for the years 1903-5, 23 cases of inversion were reported and in examining them it was very evident that in the majority of cases the occurrence had followed pressure from above or traction from below. William says that this accident is scarcely ever seen when labor is properly conducted.

Out of 100 cases tabulated in a given series, but three were delivered in hospitals; these tabulations, however, are from large clinics where the technic of delivery is controlled by a single individual. It occurs to me that the injudicious use of large doses of pituitrin may be a predisposing etiologic factor.

SYMPTOMS.

Inversion of the uterus is followed by alarming symptoms of shock and hemorrhage, somewhat dependent upon the amount of inversion present, the more complete the inversion thereby pulling down structures from above, proportionately great will be the symptoms of shock. This may reflect very seriously upon the heart through reflex action. Hemorrhage is always a prominent factor and in the recent case demands immediate and urgent attention. When the inverted uterus remains in this position for a considerable time the contraction ring made by this re-duplication may shut off circulation sufficiently to cause gangrene of the portion exposed.

DIAGNOSIS.

If the obstetrician is in attendance at the time inversion takes place and the inversion is sufficiently extensive to protrude from the vulva with the placenta attached, the diagnosis is evident, but such instances where the inversion is not sufficient to propel the fundus through the external parts, very careful examination under the most cautious circumstances must be made. To this end the bladder should first be emptied, for should the inversion have existed for two or three hours or more, the likelihood is that there will be a marked urinary retention and the well filled bladder would be mistaken for the fundus uteri, accordingly it is necessary that the bladder should be emptied so that intelligent manipulation could be made from above. With this preparation, with the

patient anesthetized, one hand above and the other introduced into the vagina, will reveal the pathology.

PROGNOSIS.

According to Crosse (10) one-third of the women with inversion of the uterus, die either immediately or soon after. Patients may die either as a direct result of shock or hemorrhage, but usually a combination of the two. When immediate fatality does not follow, a large number die as a result of infection. To conclude, it may be said that it is one of the gravest of obstetrical accidents.

TREATMENT.

As regards prophylaxis it cannot be too strongly emphasized (1st) that the cord should not be dragged down (2nd) that Credé's method should not be injudiciously employed (3rd) that in no instance should the fundus uteri be so pressed down that indentation is made upon it (4th) that Credé's method should not be employed except when the uterus is in contraction. This last in our opinion is highly important (5th) the obstetrician should remain with the patient until a firm uterine retraction has been established.

The more recent the inversion, the more surely and safe it can be reduced. In the twenty-three collected cases of Monro-Kerr's before referred to, they were all treated by competent obstetricians, yet in three cases they failed and in four accomplished the replacement with difficulty, therefore, it seems evident that considerable patience and sufficient time be employed in attempting a replacement. In instances where the uterus is open and flaccid, replacement can usually be made by introducing one hand into the vagina and with the closed finger and thumb pressed upward on the most dependent portion, the other hand above serving such assistance as the pressure from below would indicate. In the later case, where some time has elapsed between the time of the inversion and the attempt at replacement, Bandl's ring will often be found firmly contracted, and into this narrowed portion we find the difficulty to be overcome. Considerable time with gentle force will usually be productive of good results. Attempting this maneuver too rapidly, may cause rupture of the uterus by the hand within the vagina, while time and patience will usually tire out the muscles forming Bandl's ring, and permit the desired replacement.

In rare instances these maneuvers can be carried out without the aid of an anesthetic on account of the shocked condition of the patient having obtunded her sensibilities, but in the general run of cases a full surgical anesthesia with the patient in a semi Trendelenburg position will be advantageous.

There is a division of opinion among the best obstetricians as to whether the portion first inverted should be the first or last to be replaced, but I think in general this would depend more largely upon the time that had elapsed between the inversion and the attempt at replacement. On such occasions where the placenta remains attached and it is possible to replace both placenta and uterus in toto, this procedure should be attempted.

When only parts of the placenta are attached, these should be removed, the area well disinfected and the uterus replaced as above indicated. When the uterus has been in a state of sub-acute inversion and considerable involution has taken place, adhesions will have been formed sufficient to make the maneuvers referred to before inapplicable and impossible. When such cases appear, some type of radical operation becomes necessary.

Kuestner's operation for this condition consists in opening Douglas Pouch, inserting the left index finger through the opening and into the cup shaped uterine fundus. If the fundus of the uterus is outside of the vulva, the inverted portion will appear uppermost and therefore easily accessible to the operator.

The longitudinal incision in the median line divides the cervix at the inverted ring and is carried up the body of the uterus to the fundus. With the liberty given after the division of this inversion ring, the organ may now be re-inverted into its normal position by the finger remaining in the cup shaped portion, while the thumb pushes upward upon the fundus. The fundus is now drawn through the posterior incision through Douglas Pouch where the uterine wall is sown together and the organ returned to the pelvic cavity.

Spinelli's operation has much the same maneuver and answers the same purpose but is made through the anterior vaginal wall by making transverse incision across the cervix as in the case of an anterior colpotomy, pushing the bladder up and gaining admission to the pelvic cavity from the front instead of behind, the other details are followed out much the same as the Kuestner operation.

ILLUSTRATIVE CASE.

On April 10th, 1919, at one A. M., Mrs. C. B. gave birth spontaneously to a baby girl at full term after a moderate labor of ten hours.

The physician in charge who afterward referred this patient to me, waited one hour and when the placenta was not forthcoming, made pressure above with conjoined dragging upon the cord, which resulted in complete inversion of the uterus so that the fundus presented below the vulva. The patient was left in this condition until the following morning when an attempt was made to reduce it. The effort was futile but the patient was allowed to remain at home during the whole day. She was sent to the hospital at eight o'clock the evening of April 11th, when I first saw her. Therefore, a complete inversion had been present for twenty hours. The patient was a robust woman of the working class and presented a ghastly appearance caused by the severe shock and bleeding which had continued from the time of the inversion. Her temperature was 97.5, pulse 140, with blood pressure 110 systolic and 90 diastolic. A blood count which was taken after she was returned to her bed showed 1,500,000 reds with 40 per cent. hemoglobin, thus you can see she had bled an alarming amount. This coupled with the associated factor of shock made a bad prognosis, however, the patient was placed upon the table and a full surgical ether anesthesia was administered. As soon as the anesthesia was sufficient, hypodermoclysis was at once instituted under the breasts. On examination the uterine fundus and body was seen between the patient's thighs, and while the placenta had in a large measure been removed, small portions of it still remained attached. The portions of placenta which were adherent were removed, the whole surface of the endometrium was bathed with ethereal soap and sterile water, followed by a 2 per cent. iodine solution. The patient was then placed in a semi-Trendelenburg position, the left hand inserted into the vagina with the fingers and thumb extended and the uterus pushed up, being careful that the force from below was made in the long axis of the strait, the hand above becoming of equal importance in its effect to replace the organ after the part below was pushed up above the fundus where the right hand successfully assisted in drawing the uterus upward, much the same maneuver that the hand assumes when milking a cow. About fifteen minutes of gentle manipulation succeeded in re-inverting the uterus through Bandl's ring which seemed to be the chief obstacle to its replacement. Several two inch pieces of iodoform gauze one yard in length were separately packed into the uterus and left in such a way that they could be removed singly in thirty-six hours, thus giving no inclination for the uterus to return to its former position because of all of the gauze being removed at one time.

We were fortunate in having a good anesthetist so that little ether was used. The patient was returned to her bed, the foot being elevated and the Murphy drip consisting of tap water, soda bi-carb. and glucose was instituted. The patient remained in the hospital sixteen days with an uneventful recovery. She showed a mild infection which disappeared after two or three days.

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A REMINISCENCE OF SIR WILLIAM OSLER.

BLANCH N. EPLER, M.D.

KALAMAZOO, MICH.

In the passing of Sir William Osler, Regius Professor of Medicine, Oxford, England, at 13 Norham's Gardens, the world has lost from its midst a remarkable man. Claimed by the United States, Canada, and England, his magnetic personality and master mind has brought about a close relationship between the distinguished members of the Medical Profession of these countries.

During the war his Oxford home being the rendezvous of many of the Medical Profession, this relationship was strengthened.

To us as students in the 90's, the first years of the Johns Hopkins Medical School, there was reflected from this great Clinician the stimulus of the opening up of Medicine as a science, for it was the time of Koch, Pasteur and Lister and he with his brilliant colleagues, Dr. Kelly, Welch Flexner, Mall and Halsted of Hopkins, surrounded us with an atmosphere of personal interest, and encouraged research and investigation.

During the last of our four years course, three months was respectively spent in the service of each of these great men and with them we passed practically a half day in operating room or hospital ward or laboratory or autopsy room.

It was the custom each morning for the Clinical Group to await at the Medical Ward Dr. Osler's coming. He was always to the minute and we were greeted by a joyous, scintillating personality, flinging forth repartee from some classic or the Bible or some remark to his resident physician, interne or Clinical Clerk on some research result or case.

Grouping about each bed in turn, we listened, observed and wrote as the great Clinician went over the patient. Nothing escaped him, whether a mark on the skin or a hammer toe, and everything possible was brought into co-relation with the disease and patient and laboratory anticipations. Each patient proved a text

book to us and he was left with an encouraging smile and a feeling of absolute confidence that the case was understood.

Dr. Osler's knowledge was profound; but, always a student in new medical problems and investigations, he kept keenly alert, and had a marked faculty of interesting the students in various pioneer lines of research, opening up the way most generously by providing facilities from the laboratory and materials from the wards of the hospital. Thus truths in physics, or chemistry or physiology were continually disclosed. Dr. Osler was a trained laboratory man and possessed marked knowledge of morbid anatomy.

At this time, among several facts which he impressed upon us, I especially remember those of the fever of endocarditis; the ball valve thrombus at the mitral valve; the ball valve stone at the ampulla of Vater; and the specific lesions of small pox.

Dr. Osler always had a series of similar cases to the one under consideration, which he discussed with regard to the bearing on the disease; and opening up the pathological findings in their detailed relation to the history of the case, he engrafted in his pupils the habit of considering the gross and microscopical picture of the organic lesion in association with each phase of the disease. Even at the end of the fourth year, he impressed upon us that we knew so little, it was better to assume this attitude of mind in starting our practice.

Dr. Osler "stayed" with his students and weekly at his home gathered his so-called "clinical clerks" about him for discussing their cases and unfolded to them, from the time of Hippocrates, the history of the disease as presented in the old editions of the Science and Art of Medicine in his library, which was one of the best in existence. He was always Master of his subject, with a marvelous memory of details of cases, seen even years before, and he possessed a boundless knowledge.

As far back as the 90's, he used to say to his students that he who knows syphilis knows nearly all of medicine.

Sir William Osler was born in Tecumseh, Ontario, in 1849, the son of Rev. F. L. Osler. He was one of a large family, all since leaders in their various professions.

He was graduated at Trinity College, Toronto and studied medicine at McGill, doing research work in London, Berlin and Vienna.

Dr. Osler became early in life interested in nature through Rev. W. A. Johnson, a nature lover, with whom he made a study of diatoms

and used the microscope. Two other clergymen and a Dr. Bovell, who was also a professor of natural Theology, not only instilled into him a similar love of Nature but also a love of Biblical and Classical Literature, thus laying the foundation for his exquisite literary style and expression.

While in London in 1874 at 24 years of age he published that important contribution to medicine on the blood platelets and at 25 he returned to Montreal as a Medical Professor in McGill and in the Smallpox hospital, which position he held until 1884 when he was called to the Chair of Medicine at the University of Philadelphia. Here, he broke through the stereotyped medical teaching held so firmly by Pepper and became associated with Musser, Weir Mitchell and Howard Kelly.

In 1889 he, as the most able Clinician available, was called as Chief of the Medical Clinic to Johns Hopkins Hospital and University where he was ever afterward known by his Colleagues as "The Chief."

The life of Johns Hopkins Hospital and Medical School from 1889 to 1905 was strikingly that of Dr. Osler's influence, and is itself a separate, valuable history for all other medical schools, as it was a marvel of organization and scientific effort.

Among the men Dr. Osler drew from Canada to assist him at Johns Hopkins were Drs. Lewellyn Barker, Thomas McCrae, Fitcher and John McCrae, the composer of "In Flanders Fields." His life with these men and his other colleagues was one of affection and continual round of work and medical uplift.

The Medical School was not opened by the University until an endowment of \$500,000 was obtained, which was largely Miss Garret's donation, when she stipulated that the school must be of a certain high standard and must admit women on the same par as men. It was opened in 1893, four years after Dr. Osler's going to the Hospital.

Dr. Osler's entrance into Baltimore brought order out of chaos in the medical fraternity. His rare character of kindness and affection for all men, even one-half way good, his keen appreciation of the doctor's work in small towns and country practice with few advantages in their broad experience of caring for all varieties of diseased conditions, made him a friend of each and every physician in country or city. He was a master among men and secured co-operation.

Interested especially in tuberculosis, syphilis and preventive medicine, he brought into play

some of the great factors now in force in connection with these conditions.

He founded the Laennec Society in 1912, the first in the world to devote itself to the study of Tuberculosis, and brought forth in 1889 the first public discussion of the value of outdoor night air in consumption, while in 1904, he was instrumental in helping to bring about the first Tuberculosis Exposition under the State Board of Health, in this country.

He inaugurated home visiting of the dispensary tuberculosis cases and a special department of tuberculosis, from which have grown the Phipps Laboratory and department of Tuberculosis.

In 1889 he aroused Baltimore and Maryland to the low standard of medical schools and practice, which culminated in the raising of the standard of medical schools, not only in Maryland but in the United States, and in the legislative bills in Maryland in regard to medical practice.

Baltimore at this time had over-ground sewerage, which any morning crossing the alleys and streets, we would slip into and might be covered with the days dishwashings. This system was shown to be an aid in keeping up the large typhoid rate.

Dr. Osler moved the American Public Health Association to action in the eradication of typhoid and the installing of proper water and sewer systems in Baltimore.

The local Medical Societies and Library he drew out from their lethargy and made of them a marked success, putting into them the spirit of giving standing to doctors with honesty of purpose and reaching those who had something to give but knew not how to give it, and providing the printed page that all might be kept up to date.

Some of his own 700 publications in these libraries show frequent use and the following passage, which was especially well thumbed, suggested the personal influence of his counsel upon others.

"The measure of value of the nation to the world, is neither the bushel nor the barrel, but mind: wheat and pork, though useful and necessary, are but dross in comparison to the intellectual products which alone are imperishable."

This passage especially seems applicable in these times of commercialism within and without the medical profession.

The organization of the medical work and clinic at Johns Hopkins stands prominent in the history of such work. It was original and unique, embodying all the best in this country

and abroad, in order that the medical students be made a part of the practical functioning work of the ward, laboratory and dispensary, and that practical technical knowledge might be instilled rather than that from didactic lecturing.

Dr. Osler's clinical work was an art and science in itself an ideal for medical teaching.

In 1905 he was called from Johns Hopkins University to Oxford, England as Regius Professor, from which position he has been intimately and continually in touch with events and conditions in his old field of labor. In 1911 he was **knighted**.

The war took his son and only child—a young man—bringing to him, as to Roosevelt, a crushing bereavement, and like Roosevelt, a short time afterwards, on December 29th, 1919, he left us, after a month's illness with pneumonia complicated by empyema.

Only on December 25th, he had sent greetings to Johns Hopkins.

Dr. Osler was always troubled by the misquoting in the press of his having said that a man of 60 is beyond usefulness and should be chloroformed. The facts are these: In delivering an address to the students of the University proper in Baltimore—not the medical students—and in urging on them the value of their young years—he quoted from an old time doctor the above remark. **This did not represent his views, but feeling that a denial could never overtake the report, he made none through the press.**

Loving his fellow men, saying evil of none, giving all his powers to the profession, encouraging all virtues and culture, and beloved by all, this great character, this ideal physician has left us, to be deeply and sincerely missed as have few others.

TECHNIC OF NERVE SUTURE AND NERVE GRAFTING.

By Charles A. Elsberg, M.D., N. Y. The Journal of Amer. Med. Ass., Vol. 73, No. 9.

From the beginning of a peripheral nerve operation to its end a very perfect technic is necessary. The freeing of the ends of a divided nerve and the excision of the surrounding scar tissue with the least injury to the delicate nerve structure, the perfect control of bleeding, the accurate sectioning of nerve bulbs until good nerve fibres are exposed, the proper approximation and suture of the nerve ends without tension—all these and many other details are of great importance.

1. Identification of the Injured Nerves.—Expose a normal part of the nerve or nerves below and above the lesions, work from normal to scar tissues, then identification of injured nerves and their branches is always possible.

2. Exposure.—The lower end of a divided nerve should always be exposed and freed first because it is the degenerated end. The upper end should be exposed for as short a time as possible and should be handled with special care. Strong traction should never be made on it, and it should not be stretched in the effort to approximate the ends of a divided nerve.

3. Examination for Nerve Bundles.—If there is no gross separation of the ends of the nerves but only a bulbous thickening, the bulb should be minutely examined before being sectioned transversely. No matter whether the patient presents the symptoms and signs of a complete interruption or not, the bulb should be carefully incised in a longitudinal direction in the search for nerve bundles which can be saved. In a considerable number of patients, some perfectly good nerve bundles are preserved on the surface of or in the deeper parts of the bulb, and such nerve bundles may be freed from the scar tissue and not divided. When these nerve bundles run on the surface of the bulb, they can be isolated without much difficulty. When they run thru the center of the bulb their isolation and preservation may require much patience.

4. Excision of the Bulbous Enlargement or of End Bulbs.—When there is a complete anatomic discontinuity of the nerve, the bulb or end bulbs should be divided transversely, with a sharp

scalpel, in successive sections until normal funiculi can be readily recognized. As the upper end of an injured nerve is often swollen, perfectly good funiculi may present an edematous or glairy appearance. Usually there is fairly active bleeding from the intravenous blood vessels when normal funiculi are reached.

The ideal application of the ends of the nerve would be one in which the cut end of each funiculus is placed exactly opposite to its corresponding end, but in practice this is impossible.

The Divided Ends of a Nerve.—The approximation should always be made without tension. In the majority of instances, this can be accomplished by freeing the nerve ends—especially the peripheral part—for a considerable distance. In this procedure, due consideration should be given to the location of branches, and care should be taken that important sensory and motor branches are not injured.

The suture of the divided ends of a nerve is a very delicate procedure. For suture material use Carrel needles with very fine silk. For the actual union perineurial stitches are used. All of the perineurial sutures should be passed before they are tied, care should be taken that the sutures just bring the funiculi into opposition. If the sutures are tied too tightly, the funiculi are bent at their ends with a resulting poor approximation. The best approximation can be obtained by mattress sutures.

Transplantations of the nerve to a more superficial level are sometimes necessary. To separate the line of union from the bone, muscle or fascia, plastic operations must often be performed to surround the line of union with a cuff of tissue and to protect it from the surrounding scar tissue.

As all experience in human surgery and animal experiments have shown, a direct end to end suture is far preferable to a nerve grafting. If the ends of a divided nerve cannot be approximated by all the methods described, a graft must be inserted between the ends of the nerve.

If the condition of a nerve permits it, a neurolysis is always better than a resection and suture, and a resection and suture far better than a resection and grafting. The result of neurolysis, in cases in which it may properly be employed, are very satisfactory.

Official Minutes

of the

Mid-winter Meeting of the Council

Detroit, January 13 and 14, 1920

The Council, in response to call of its chairman, met in regular session in the Wayne County Medical Society Building in Detroit. Jan. 13 and 14, 1920.

FIRST SESSION.

The first session was called to order by the chairman, W. J. Kay, at 7:30 p. m., Jan. 13, 1920, with the following councillors present.

W. J. Kay, J. McLurg, C. T. Southworth, A. L. Seeley, J. B. Jackson, W. G. Bird, S. K. Church, L. W. Toles, Guy Kiefer, Frank Holdsworth; President, C. H. Baker; Treasurer, D. Emmett Welsh; Associate-Editor, Guy L. Connor; Geo. H. Frothingham, Chairman of the Committee on Civic and Industrial Relations and the Secretary-Editor F. C. Warnshuis.

ANNUAL REPORT OF SECRETARY-EDITOR.

The following report was read:

ANNUAL REPORT 1919 SECRETARY-EDITOR.

To the Chairman and Members of the Council
Of the Michigan State Medical Society

Gentlemen:

In compliance with the provisions of our Constitution I am submitting to you and through you to our component members, my Annual Report as Secretary-Editor for the year nineteen hundred nineteen.

I would indeed be remiss if I failed at the very outset to record my appreciation for the able and splendid manner in which D. Emmett Welsh conducted the affairs of this office during the period in which I was in the Service. Personally, I know the extent of time and energy he devoted to the work, which cannot be fully appreciated except one be intimately familiar with the innumerable details that arise in this office and the many perplexing problems that present. Doctor Welsh rose, as only he can, to the occasion and to him there is acknowledged a lasting debt of appreciation.

He served this Society and through it our country equally as honorably and valiant as did they who enlisted in the Medical Corps.

FINANCIAL STATEMENT

I present the following financial statement and exhibits of resources, receipts, and expenditures certified to by a public accountant:

January 6, 1920.

To the Council of the Michigan State Medical Society.

Gentlemen:

I have completed the examination of the books and accounts of the Michigan State Medical Society for the year ended December 31, 1919, and am pleased to submit the following exhibits:

EXHIBIT A.

Trial Balance, December 31, 1919.

Bond Account -----	\$ 4,300.00	
Liberty Bond Account --	3,500.00	
G. R. Savings Bank ----	925.78	
Accounts Receivable ----	794.69	
Journal Expense -----	7,781.23	
Society Expense -----	2,943.59	
Reprint Expense -----	644.90	
Annual Meeting Expenses	503.19	
Council Expense -----	196.87	
Present Worth Account---		\$10,739.80
Journal Subscriptions ---		4,045.53
Advertising Sales -----		3,545.32
Membership Dues -----		2,276.25
Reprint Sales -----		527.48
Interest Received -----		389.00
Outside Subscriptions ---		30.62
Sale of Extra Journals---		8.50
Defense Fund -----		27.75
	\$21,590.25	\$21,590.25

EXHIBIT B.

REVENUE—

Statement of Revenue and Expenses for 1919.

Journal Subscriptions ---	\$ 4,045.53	
Advertising Sales -----	3,545.32	
Membership Dues -----	2,276.25	
Reprint Sales -----	527.48	
Interest Received -----	389.00	
Outside Subscriptions ---	30.62	
Sale of Extra Journals ---	8.50	\$10,822.70

Expenses—

Journal -----	\$ 7,781.23	
State Society -----	2,943.59	
Reprint -----	644.90	
Annual Meeting -----	503.19	
Council -----	196.87	\$12,069.78
		<hr/>
Net loss for the year 1919		\$ 1,247.08

EXHIBIT C.

Balance Sheet, January 1st, 1920.

ASSETS.

CURRENT—

Checking Account at G. R.	
Sav. Bank -----	\$ 925.78
Accounts Receivable -----	794.69
<hr/>	
	\$ 1,720.47

SECURITIES (In Custody of Treasurer.)

Liberty Bond Account ----	\$ 3,500.00
Masonic Temple Bonds --	2,300.00
Citizen's Telephone Com-	
pany Bond -----	2,000.00
<hr/>	
	\$ 7,800.00
<hr/>	
Total Assets -----	\$ 9,520.47

LIABILITIES.

CURRENT—

Due Defense Fund -----	\$ 27.75
<hr/>	
Net Present Worth----	\$ 9,492.72

PRESENT WORTH.

Represented by Jan. 1, '19	\$10,739.80
Net Loss for year 1919	1,247.08
<hr/>	
Net Present Worth,	
Jan. 1, 1920 -----	\$ 9,492.72

The checking account at the Grand Rapids Savings Bank was reconciled as of December 31, 1919.

The Securities in the custody of the Treasurer, Doctor D. Emmett Welsh, were exhibited to me and found to be correct.

Am pleased to advise for your information that the books and accounts of the Michigan State Medical Society are in good condition and the above Balance Sheet, Exhibit C, in my opinion represents the true financial position of the Michigan State Medical Society as of January 1st, 1920.

Thanking you for the work, and awaiting your further instructions, I am

Yours very truly,
Walter H. Shultus,
Certified Public Accountant.

January 6, 1920.

To the Council of the Michigan State Medical Society.

Gentlemen:

The following will convey to you the amount of funds of the Michigan State Medical Society in my hands for the year ended December 31st, 1919:

Citizens Telephone Co.	
Bonds, Nos. 139 and 140	\$2,000.00
Masonic Temple Bonds:	
18 \$100.00 bonds, Nos.	
199 to 216 inclusive,	
5 \$100.00 bonds Nos. 225	
to 229 inclusive -----	2,300.00
Liberty bonds, First Issue	
3½%; No. 8450 -----	500.00
Liberty Bonds, Second Issue	
4%; No. 1,439,859 -----	1,000.00
No. 661,282 -----	500.00
Liberty Bonds, Third Issue	
4¼%; No. 1,110,074-----	1,000.00
No. 633,293 -----	500.00
	\$7,800.00

The following will convey to you the amount of funds on hand in the Defense Fund for the year ended December 31st, 1919:

Liberty Bonds, Second, Issue	
4%; No. 661,283 -----	\$ 500.00
Balance in checking account	
at Peoples' State Bank	
at Detroit, Mich. -----	132.20

Total -----	\$632.20
Respectfully submitted,	
D. Emmett Welsh,	
Treasurer.	

COUNCIL EXPENSE, 1919.

Hotel Fort Shelby -----	\$ 42.20
Drs. D. Emmett Welsh and	
A. Wertz -----	28.00
Dr. J. B. Jackson -----	14.50
Dr. C. T. Southworth -----	30.00
Dr. W. J. DuBois -----	18.98
Dr. W. G. Bird -----	6.00
Dr. F. Holdsworth -----	21.72
Dr. S. K. Church -----	9.30
Dr. J. McLurg -----	13.54
Dr. A. M. Hume -----	12.63
	\$196.87

ANNUAL MEETING.

Hotel Statler, Dr. Welsh and	
A. Wertz -----	\$ 26.40
Dr. D. Emmett Welsh, railroad	
fare Drs. Welsh and Wertz	25.00
W. H. Whitford, stenographers	429.80
Dr. W. G. Gillette, guest -----	5.00
Dr. Dean Lewis, guest -----	25.00
Gradesman Company, blanks --	13.50
Thaddeus Walker, M.D., Treas.	
Wayne Co. Med. Society	194.43
	\$719.13
Dr. J. W. Vaughan, Exhibit Committee	215.94
	\$503.19

A. M. A. DELEGATES' EXPENSES.

Dr. D. Emmett Welsh -----	\$125.00
Dr. J. D. Brooks -----	125.00
Dr. A. W. Hornbogen -----	165.00
Dr. Walter J. Wilson -----	117.77
	\$532.77

The reported loss of \$1,247.08 for the year is accounted for by:

1. Diminished membership receipts. It must be remembered that no membership dues

were received from members in the Service. County Societies only remitted for subscriptions to the Journal.

2. For the first time, the expenses of our Delegates to The American Medical Association were paid. This incurred an expenditure of \$532.77. It is recommended that an expression of sentiment be recorded that our parent organization, the A. M. A., assume all or at least part of the Delegates' from State Societies expenses, inasmuch as they serve not only for the good of the profession of the State that sends them but also for the profession of the entire country.

3. Increased cost of postage is explained by increased correspondence in getting out the Victory number, remailing of photographs and a letter campaign for members.

Our present worth January 1, 1920, is \$9,492.72.

Here it may be well to note that the funds of our Medico-Legal Committee require replenishment. The splendid work done by the Chairman and the good that has been accomplished is known to all. We cannot afford to limit the work of the Medico-Legal Committee or increase the difficulties that ever confront it by hampering it with insufficient funds. It is recommended that an amendment be presented to the House of Delegates increasing the State dues to \$5.00 per year. Of this added revenue, one dollar and fifty cents, thus to be derived, one dollar to be placed to the credit of our Medico-Legal Committee and fifty cents to our Society for committee work. The appropriation to our Society for Committee work is indicated and will be explained in further detail in my comments on Society work.

THE JOURNAL.

The net receipts of the Journal, composed of dues and advertising, amounted to \$7,590.85; the net cost was \$7,781.23.

By reason of persistent effort we are gradually increasing our advertising receipts which during the year amounted to \$3,545.32. Our December issue contained \$369.46 of advertising; the January issue, \$468.82; and the February issue will contain \$512.99. Whether or not this increase will be maintained during 1920 depends upon the business world's prosperity and our members' patronage of our advertisers. I cannot but urge that each Councillor continuously remind the members in their respective districts to support their Journal by patronizing its advertisers.

The net cost of each copy of the Journal is 18 cents, for which each member pays 12½

cents. It will be apparent that without advertising receipts the present Journal could not be mailed to our members. During the year 636 pages of reading matter were printed in the twelve issues. Our mailing list now contains 2638 names to whom a copy is sent each month.

The non-ending increase in paper, ink and labor cost continues to add to our financial difficulties. Upon our return from Service we secured information upon the paper market and guided by that information two carloads of paper, a year's supply, was contracted for. Had this not been done our Journal would be costing us approximately \$40.00 more per issue today on account of scarcity of paper and its increasing price from month to month. Likewise we became cognizant of the labor situation and after considerable persuasion we induced our printer to enter into a flat contract for printing our Journal for the ensuing year. We were disinclined to accept his proposition of cost plus ten per cent. The contract now in effect is saving us from \$90.00 to \$110.00 per month. I attach letters from our printers revealing how our contract has served to our financial advantage. In 1915 an average issue cost us \$464.11; in 1916, \$431.81; in 1917, \$479.74; and in 1918, \$496.39.

These and other business details of the Journal call for constant alertness and detailed attention. In spite of our contract each issue presents new and old difficulties so that the task of getting out each number calls for almost double the work that was required three and four years ago and quadruple that of eight years ago. I cannot convey in words the labor and time required in editing and getting out the Journal. At times it is indeed disheartening.

As to its value, appearance and subject matter, this appraisal must be made by the Council and our members. We have in mind some new features but from present business conditions it is not deemed prudent to institute them. This is certain, that the Journal has not exhausted its possibilities, and undeveloped fields but await stabilization of industrial affairs.

Certain specific requests for instruction as to financial matters pertaining to the Journal will be presented in a special communication.

Editorially our policy is to continue to cause each issue to contain something of educational value for every reader and to inspire and achieve co-operative action on the part of our members as a whole to conserve and protect their professional and material interests.

If our policy merits criticism, if our results have been deficient, we invite your constructive suggestions and instruction. We are not unaware of the fact that cost and limited space have prevented our becoming a medium for the scientific discussions and investigations of several special organizations that exist in this State. We do feel that these interests should be served by our publication and that this literature should be incorporated in our Journal. It is recommended that steps toward making such provision be undertaken.

SOCIETY WORK.

In commenting upon the present condition of our Society and its component units one cannot help but experience an avalanche of conflicting thoughts that present themselves when given to retrospective review and speculation as to the future that awaits. As did every industry, trade, business and profession, so also did the medical profession of Michigan experience the vicissitudes of these bellicose days. Proudly may we hold our heads when we recall the splendid percentage of our members who went forth to active Service and of whom all but four were permitted to return to their homes and friends.

Victor Clare Vaughan, Jr., Detroit, Lieutenant Colonel—Consultant, died in France, June, 1919.

W. L. Miller, Saginaw, Killed in action, October 26, 1918.

A. C. McCurdy, Battle Creek, 33rd Engineers, died in France, Nov. 28, 1918.

James A. McQuillan, Jackson, killed in service, October 26, 1918.

These made the Supreme Sacrifice. No further eulogy or words of mine can increase the effulgent glory of the subscription of their lives to the cause for which we fought. But would it not be well that our Society provide and place in our State University Medical School a suitable tablet recording the names of these, our honored dead, that posterity for all time may have a visual reminder that these our professional brothers gave their lives for humanity's sake in that greatest of all World's Wars? We tender this suggestion for your consideration.

By resolution of the House of Delegates and the Council, the dues of all members in the Service were remitted. Consequently, our total receipts of dues for the year were markedly decreased. From our best obtainable figures 753 doctors of Michigan entered active service.

This exodus of members, added to the heavy duties falling upon those who remained at

home caused an appreciable slump in Society activity and organizational work. Then as readjustment evidenced itself, numerous changes of locations began to be recorded. There was a more or less general shifting of the profession. The problem presented of securing the affiliation of former members with the County Society of their new locality.

Early in September a questionnaire was sent to County Secretaries and the following data secured:

	No. of Phys. in County	No. of Phys. Eligible	No. of Mem. in Society
Alpena -----			14
Antrim -----	12	12	4
Barry -----			2
Bay -----	65	63	58
Benzie -----	8	8	8
Berrien -----	75	60	31
Branch -----	30	30	14
Calhoun -----	140	132	105
Cass -----			5
Cheboygan -----	15	15	11
Chippewa-Luce-Mackinac	25	24	25
Clinton -----	23	23	20
Delta -----	21	21	20
Dickinson-Iron -----			16
Eaton -----	35	35	32
Genesee -----	135	125	94
Gogebic -----	22	21	15
Grand Traverse-Leelanau	30	30	24
Gratiot-Isabella-Clare --	58	56	33
Hillsdale -----			13
Houghton -----	64	60	48
Huron -----	20	20	12
Ionia -----	26	26	22
Ingham -----			65
Jackson -----	63	60	50
Kalamazoo -----			130
Kent -----	238	189	154
Lapeer -----	34	34	25
Lenawee -----	55	50	32
Livingston -----	14	14	6
Macomb -----	44	41	20
Manistee -----	21		12
Marquette -----	41	39	37
Mason -----			8
Mecosta -----	18	15	13
Menominee -----	14	14	10
Midland -----	9	9	9
Monroe -----	30	27	25
Montcalm -----	34	30	21
Muskegon-Oceana -----	58	53	53
Newaygo -----	13	13	8
Oakland -----	78	78	55
O. M. C. O. R. O. -----			12
Ontonagon -----	8	8	7
Osceola-Lake -----	15	15	4
Ottawa -----	45	32	34
Presque Isle -----			1
Saginaw -----	78	78	58
Sanilac -----	27	26	14
Schoolcraft -----	7	7	7
Shiawassee -----	40	40	24
St. Clair -----			46

	No. of Phys. in County	No. of Phys. of Eligible	No. of Mem. in Society
St. Joseph -----	32	32	3
Tri -----	24	24	20
Tuscola -----	35	35	25
Washtenaw -----	105	85	71
Wayne -----	1500	1200	957
	-----	-----	-----
	3483	3009	2642

On December 31, 1918 we had 2291 members. On December 31, 1919 our members in good standing numbered 2642, or a gain in membership for the past year of 351. We lost 21 members by death during 1919. The high membership of the past was in 1917 when we had 2504 members enrolled. We are now 138 over our largest previous membership. On August 1st, 1919, our membership was 2426. During the last four months of this year we added 216 new members. Credit for this showing is due to the splendid work and effort of County Society officers, a campaign by mail, Journal editorials and personal effort.

Barry County, dormant and without meetings for three years, is once again an active Society with full membership. Councilor DuBois and your Secretary attended its resurrection meeting.

There remain, as reliably as it is possible to estimate, about 367 eligible physicians in the State who are not members. It will be our purpose to achieve their affiliation during the coming year. So much for our membership strength.

It is the future that now concerns us. Looming up and with further reaching influence, the propaganda of Compulsory Health Insurance threatens to institute such regulations, plans and methods that prophesy the upheaval of the entire profession and threatens to overthrow our present relationship of patient and physician. Inspired, furthered and agitated by a certain coterie of would-be reformers, determined to force upon us this Russian-Prussian system, indications are clear that they will succeed unless the profession of Michigan and of the Nation become aggressively active to counteract and defeat this Bolshevism movement. President Baker has appointed a most efficient committee on Civic and Industrial relations with Doctor Frothingham as Chairman. This Committee has been splendidly active. I have invited Doctor Frothingham to be present at this session and discuss before you plans for organizational activity to protect our members' interests.

REGIONAL CLINICAL MEETINGS.

Minnesota, Wisconsin, Illinois and a few other States successfully conduct throughout their states series of district clinical meetings. These are held at stated periods and continue two or three days and are conducted by selected specialists. Such meetings have experienced exceptional co-operation and support from medical men. They may be likened to Post-Graduate Courses. From sentiments expressed it is recommended that the Council present such plan for approval by our House of Delegates and institution, if the House concurs, in the fall of 1920.

INCREASED DUES.

The suggestion, and not recommendation, of increasing our dues is made merely for the consideration as to the advisability of doing so. Certain we are that the organizational activity that the next few years will demand will increase our Society expenses. The appropriations now made and expenses assumed exceed our income from dues. Whether or not in the meeting of these expenses we shall draw upon our reserve fund or increase our dues, merits consideration.

CENTRALIZATION OF MEDICINE.

There is no denying that two sides exist in the problem of centralization of medicine in Michigan. Whether or not the time has arrived to determine which side shall receive our endorsement is likewise debatable. Nevertheless it is incumbent that this subject should receive careful and unbiased investigation with a view point of attaining a registration of dependable facts and a careful consideration of the results that will accrue in order that intelligent judgment may be exercised and thus there be established a line of activity that will accomplish the proper solution of the problem. This is requisite in order that such a centralization may be achieved and the results thereby attained exercise a universal professional benefit that will not be limited by the boundary lines of Michigan.

I hesitate somewhat in even bringing up this subject that has in the past begotten so much of rancor and dissension over a period of more than a quarter of a century. I am doing so now because I am persuaded that as men of today we are endowed with faculties that expand beyond the boundaries of cities or counties, and with that broadened view point it will be possible to eliminate local and selfish desires and cause them to give way for the intrinsic merits of the main proposition.

It is a problem that concerns the profession as a whole and its solution is sought for the benefit of the profession as a whole and not for that of a single community. If at the end of painstaking investigation and consideration the conclusion indicates that such a centralization had best be established in either Detroit or Ann Arbor or possibly elsewhere, the first and most difficult step will have been completed. Thereafter concentrated development efforts will produce all that which will be sought for.

It is suggested then that a committee composed of three members of the Council present the matter to our House of Delegates for the adoption of a resolution that will create a representative state committee charged with the duty of presenting a solution of this question which is to be submitted to the whole profession for final action.

Much more might be said upon this subject but is purposely refrained from at this time. I do urge that the Council initiate the submission and consideration of the problem for the good of the profession of Michigan.

In the January issue of the Journal's editorial pages we published an outline of fourteen suggestions as a plan for County Society activity. We are certain that if the officers and committees of County Societies institute this plan that the coming year will record the attainment of a high degree of organizational activity and influence.

In concluding this report I wish to incorporate my sincere appreciation of the confidence imposed and the consideration extended. We have ever had but one purpose—to conduct the affairs of this office for the greatest good of the whole profession and not for any individual or group of individuals. If offense has been given it is because we would not lend our efforts to the aspirations of some and so subsidize the interests of our members as a whole. We have endeavored at all times to adapt our efforts and work to the welfare of the Michigan State Medical Society—a compact, representative, affiliation of the doctors of Michigan.

All of which is respectfully submitted.

F. C. Warnshuis, Secretary-Editor.

This report was referred to the several committees of the Council.

MEDICO-LEGAL COMMITTEE REPORT.

The following report was submitted:

Detroit, Jan. 10, 1920.

To The Council Michigan State Medical Society.
Gentlemen:

For the first time in over ten years existence, this Committee is obliged to appeal, through you, to the members of the State Society for more funds with which to carry on this work. We have drawn out all our Reserve Fund except \$500, and will soon receive bills which will exhaust the balance. This condition of affairs is partly due to the war, which materially reduced our income without especially lessening our responsibilities, and since the war, has led to a greatly increased cost of trial cases as a part of the general increased cost of living.

The direct cause, however, is an unusual number of hard fought trial cases. One case alone, twice tried, cost us about \$1,700, and we understand this case is to be carried to the Supreme Court by the plaintiff. Another cost us over \$600—bills yet to be presented for the Supreme Court, where we won; and we expended about \$600 in disposing of two Upper Peninsula cases. These are mentioned to indicate the cost of defense in certain cases.

There is no way of curtailing expenses in this work. If the cases arise they must be defended regardless of cost. Cheaper attorneys would be most expensive for the unfortunate individuals thus defended and ultimately for the entire Michigan profession. That we have been able to try a total of nearly seventy-five cases, three of them being carried through the Supreme Court and two having been twice tried in the Circuit Court with an income of but one dollar per year per member, shows well our economy of management.

We think, however, that the time has now come when the profession of Michigan should endorse this work by giving us more money to work with. Since we adopted the policy of having Mr. Barbour try all cases we have not lost a case which we directly handled—a record which speaks for itself. We have educated the profession quite generally to see that malpractice cases are usually blackmail, and it has become increasingly difficult in this state for the plaintiff to secure the expert testimony necessary to take his case to the jury. We have twice during 1919 encountered experts from Chicago, but the imported expert never makes as much impression on the Jury as a well-known local doctor.

We think we must face the fact that the Compensation Act has curtailed damage suits against corporations to such an extent that attorneys are willing to take greater chances and spend more money in suits against doctors than formerly.

It is suggested to the Council that the next session of the House of Delegates should amend the By-Laws so as to place two dollars per member per year in the Medico-Legal Fund. The number of cases reported to us during 1919 has slightly decreased, but the number of cases tried has increased.

Respectfully submitted for the Committee,
Frank Burr Tibbals, Chairman.

Dr. Geo. H. Frothingham, Chairman of the committee on Civic and Industrial Relationship, presented a statement of the problems that confronted his committee and the steps that were being taken to solve them. A gist of one of the problems is given in the editorial pages of this issue of the Journal.

The members of the Council entered into an informal discussion and outlined the direction of activity the committee on Civic and Industrial Relations should pursue.

Adjournment was taken at 10:30 p. m. till 9:30 a. m. Jan. 14, 1920.

SECOND SESSION

The Chairman called the Council to order at 9:30 a. m. Jan. 14, 1920, with the following members present: W. J. Kay, L. W. Toles, J. McLurg, A. L. Seeley, C. T. Southworth, J. B. Jackson, W. H. Parks, Frank Holdsworth, W. G. Bird, W. T. Dodge, S. K. Church, W. J. DuBois, President C. H. Baker, Treasurer D. Emmett Welsh, Secretary-Editor F. C. Warnshuis.

The Publication Committee, A. L. Seeley, Chairman, submitted the following report:

Your Publication Committee recommends:

1. That the policy of giving free reprints be discontinued.

2. That authors be supplied with but three illustrations per article—additional cost of illustrations to be defrayed by the author if a larger number is desired.

3. That outside subscription to non-members be increased to five dollars per year.

4. That the scope of the Journal be enlarged to provide a medium for the publication of scientific papers of associated special medical societies of Michigan. Such papers, when deemed advisable, to be edited by the Publication Committee and Editor.

A. L. Seeley.

L. W. Toles

F. Holdsworth.

On motion, the report was concurred with and adopted.

Your Committee on Finance respectfully recommends as follows:

1. That the State Society defray the expense of the annual meeting at Kalamazoo except such special entertainment features as may be furnished by the Kalamazoo Academy of Medicine.

2. That the receipts derived from the sale of exhibits be credited to the State Society.

3. That the secretary engage competent stenographers for the House of Delegates, General Sessions and Sectional Meetings. The Secretary-Editor is hereby instructed to publish the discussions of sectional meetings without submitting them for corrections. Corrections of grammatical errors to be made by the Editor.

4. That only the actual hotel expenses of guests of sections be paid.

5. That the annual dues of the Society be raised to \$5.00 per member on Oct. 1, 1920.

6. That two dollars of the annual dues be credited to the Medico-Legal Committee commencing Oct. 1, 1920.

7. That the request of the Medico-Legal Committee for a loan of \$1,000 be granted.

8. That the auditor's report be accepted.

C. T. Southworth.

S. K. Church.

The recommendations of the Finance Committee were discussed, section by section and then on due motion its recommendations were concurred in and the report adopted as a whole.

The Committee on County Societies presented the following report:

Your committee recommends:

1. That a suitable tablet be erected in the Medical Building of the University of Michigan in honor of the four members who made the supreme sacrifice during the recent war. That the Chairman of the Council appoint a committee of three to select a suitable tablet, unveil it at the annual meeting in Kalamazoo and present it to the Medical School.

2. That it be recommended to the House of Delegates that it take action toward securing Regional Clinical meetings.

3. That the report of the Committee on Civic and Industrial Relations be printed in the Journal.

4. That the Program Committee arrange for a general meeting on the morning of the second day of our Annual Meeting, for the discussion of the problems of the Committee on Civic and Industrial Relations.

5. That the House of Delegates meet at 2 p.

m. and 7:30 p. m. on the first day of our Annual Meeting and at 8 a. m. on the second and third days.

6. That the plan outlined for County Society activity as published in the January Journal be endorsed.

J. McLurg.

G. L. Kiefer.

J. B. Jackson.

After discussion of each paragraph the report was adopted as a whole.

Moved by Councillor Jackson, supported by Councillor Southworth that the Secretary prepare necessary amendments to our constitution and By-laws as recommended in these several reports for action by the House of Delegates. Carried.

Moved by Councillor Toles, supported by Councillor Bird that each Councillor present to the Society in his district the subject of Compulsory Health Insurance. Carried.

Moved by Councillor Dodge, supported by Councillor Holdsworth that the Chairman of the Council submit a copy of his annual report to

the House of Delegates to each member of the Council two weeks before the annual meeting. Carried.

Moved by Councillor Seeley, supported by Councillor Toles that an honorarium of one hundred dollars be paid Dr. Welsh for his services as Treasurer this past year. Carried.

Moved by Councillor Southworth, supported by Councillor McLurg that the Chairman cast the unanimous vote of the Council for reelection of F. C. Warnshuis as Secretary-Editor for the ensuing year. Carried. The Chairman did so cast and declare the election of the nominee.

Moved by Councillor Southworth that Dr. Welsh be elected treasurer for the ensuing year. Supported by Dr. Dodge and carried.

Moved by Councillor Jackson supported by several that a vote of thanks be given by the Council to Dr. Welsh for his work during the absence of the Secretary-Editor. Carried.

There being no further business the Chairman declared the meeting adjourned.

W. J. Kay—Chairman.

F. C. Warnshuis—Sec'y.

ANNUAL MEETING

Kalamazoo

May 25h, 26th and 27th, 1920

PLAN NOW TO ATTEND

**Special Program—National Speakers
Well—A Regular up to the minute
Meeting.**

The Journal

OF THE

Michigan State Medical Society

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

A. L. Seeley, ChairmanMayville
 L. W. TolesLansing
 R. S. BucklandBaraga

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 Associate Editor, Detroit.

All communications relative to exchanges, books for review, manuscripts, news, advertising, and subscription are to be addressed to F. C. Warnshuis, M.D., 4th Floor Powers Theater Building, Grand Rapids, Mich.

The Society does not hold itself responsible for opinions expressed in original papers, discussions, communications, or advertisements.

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February, 1920

Editorials

ANNUAL MEETING.

The Council has selected the dates of May 25-26-27 for the holding of our Annual Meeting this year in Kalamazoo.

The Local Committee on Arrangements consists of Drs. C. E. Boys, Chairman; B. A. Shepard, E. P. Wilbur, Herman Ostrander and L. H. Stewart.

On account of a number of important matters to come before the House of Delegates, its first session will be held at 2:00 p. m., the afternoon of the first day, 7:30 p. m., that evening and at 8:00 a. m. on the 26th and 27th.

Further announcements will appear in succeeding issues of the Journal.

UNIVERSITY CLINICS.

Announcement has been made of the holding of monthly clinics, consuming two days, at the University Hospital and to which the profession is invited. The purpose being to provide the doctors of Michigan with an oppor-

tunity of witnessing modern diagnostic methods and treatment. Further, to create and cement a closer relationship between the Medical Department of the University and the practitioners of the State. The first of these clinics was held on January thirteenth and fourteenth.

For some years there has existed a seeming apartness between the profession and those connected with the University Medical Department. In certain instances there has been a bitterness and on the whole there has been a general misunderstanding that has grown while no one made the effort to bring about a clarification of the situation. During the past few months changes and innovations have been instituted and reorganization of the work at the University Hospital undertaken. Indications are that this year will witness a confidence-inspiring administrative policy being established and better scientific work resulting all along the line.

We have no hesitancy in stating that these monthly clinics will be well worth attending. The two days of time devoted by a doctor in attending them is the best investment possible—he will be a better and abler man for having done so. Each one will return home inspired to do better work based upon modern scientific fundamentals and practices thereby bringing to each community some definite good as the result of this clinical plan. We anticipate likewise a clearer understanding and a closer relationship between all concerned.

By way of suggestion we trust that those in charge of these clinics will not have overlooked making provision for the comforts of the visiting doctors. In the past Ann Arbor hotel accommodations have not been very satisfactory and it will be well worth while that their managers be induced to make provision for the special care of the clinic visitors and establish some modern improvements in their rooms.

Another suggestion—we as a State Society have never met in annual session in Ann Arbor in over twenty years. If ample dormitory and hotel accommodations are obtainable it might result in the House of Delegates'

decision to accept an invitation to hold our 1921 meeting in Ann Arbor.

To return to our subject—we extend our good wishes for the success of these clinical meetings and urge attendance at them. They will certainly accomplish much for the good of all.

JUST A THOUGHT.

Read this thought, ponder over it; then, if you will, execute it.

This is your Journal and you are assumed to be not alone a reader but also an editorial collaborator and supporter. The publication of the Journal is not a single individual's or a small group of individual's responsibility. Primarily the Journal belongs to and is intended to be representative of the entire profession of Michigan. It is your official organ and reveals your individual as well as collective status, ability and progressiveness. It reflects the professional attainments, alertness and abreastness of the entire profession of this state. It establishes, in a great measure, our professional standing among medical men in this country. It creates the final appraisal of the value of our state organization.

If you concede all of this to be true, then you have as an individual a definite obligation to your Journal. That obligation consists of (a) Submission of Original Articles and Clinical Case Reports that are scientific, practical and of timely value. (b) Submission of Constructive Comment and also criticism upon professional and organizational activity in our state. (c) The sending in of news notes and items and reports of county meetings and hospital activities. (d) Patronage of our advertisers who aid in defraying publication expense.

Are you willing to meet up to your obligation?

COMPULSORY HEALTH INSURANCE.

What is the attitude of the American Medical Association?

As in previous issues we have indicated that

the above movement demands study and action on the part of our members. Our committee on Civic and Industrial Relationship is aggressively active in securing information upon the subject for your benefit. It is proposed to disseminate this information through the Journal and by other means. The committee proposes to acquaint each member with the details and to outline a definite course of action.

The statement given below by the chairman of our committee, Dr. Frothingham, develops a startling as well as threatening stand of our council on Public Education of the A. M. A., the President of the A. M. A. and a certain Dr. Rubinow—the latter in a dual role of Representative of the A. M. A. and *paid employee* of the American League of Labor Legislation. (This League is not the American Federation of Labor.)

Here are some of the existing facts regarding this important subject.:

This is not an argument for or against Compulsory Medical Insurance. That question is being studied and will be reported on later. This is simply a statement of facts regarding existing conditions which seem to call for action on the part of the Michigan Medical Society.

1. All the agitation, all the framing of bills and their introduction into the various State legislatures have been prepared under the auspices of the American Association for Labor Legislation with headquarters in New York City. The secretary is John B. Andrews and the letter heads bear the names of Alexander Lambert, I. M. Rubinow, Andrew Fusereth of the Seaman's union, John Mitchell, labor leader, Royal Meeker, labor Commissioner, Washington; Jane Addams, Sam A. Lewissohn and a sprinkling of more or less well-known people in social work and politics.

2. This Labor Legislation Association has had its bill for compulsory insurance introduced in nine states to date—New York, New Jersey, Massachusetts, Connecticut, Pennsylvania, Ohio, Illinois, Wisconsin and California.

3. Commissions were appointed in eight states to study and report on the measure. The first Massachusetts commission reported in fav-

or of the plan. A second commission reported against it and several attempts by the advocates to incorporate provisions for Compulsory Insurance in the new Constitution have failed. Wisconsin and Connecticut reported flatly against it. New Jersey and Ohio reported in favor. Illinois and Pennsylvania asked for more time for consideration. Later Illinois reported against.

4. Two commissions with Dr. Rubinow as paid expert counsel reported in favor of the Social Insurance in California. Dr. Rubinow conducted an active campaign in its favor but when it was put to a referendum vote, the people of California voted it down almost three to one. There were 358,324 votes against and only 133,858 in favor.

5. New York has been fighting for three years. In a letter to me, dated Nov. 20, 1919, John B. Andrews, secretary of the American Association for Labor Legislation wrote:

"Under separate cover, I am sending you a copy of the health insurance bill as it passed the Senate of New York last April. It failed to pass the House due to the autocratic action of the speaker who held the bill in committee."

6. In 1917, the American Medical Association took the stand that it would be neutral on this question and advise its study by State commissions. In 1920 the American Medical Association is still assuming to be neutral and is advising us to be neutral.

7. While we are advised to be neutral, the President of the American Medical Association and Dr. Rubinow, who had been chairman of the national investigating committee for the A. M. A., are fighting in the open, shoulder to shoulder with this American Association for Labor Legislation and thereby carrying the impression that the great American Medical Association is behind the scheme.

8. The President of the A. M. A. and Dr. Rubinow have taken this position in the face of the fact that according to Dr. Green, Secretary of the Council on Public Instruction, an overwhelming majority of the medical profession have been against the plan, in the majority of states in which Compulsory Insurance

has been discussed. Dr. Green wrote me under date of Nov. 20, 1919:

"Unfortunately in the majority of states in which this question has come up for discussion, the medical profession has been divided into two camps; the first a small group, influenced by the attitude of theoretical sociologists in favor of the plan and an overwhelming majority who were violently opposed to the proposition without investigation, because they feared it would interfere with their business."

9. We must assume that the medical profession of New York are men of at least ordinary brains and intelligence and if after three years of fighting and propaganda, they are still opposed to the measure, it would seem that the purpose of further delay for investigation was not prompted by a desire to educate but in a determined effort to tire out the opponents of Social Insurance. Particularly, when you consider the attitude of Dr. Lambert, president of the A. M. A. His association is pledged to neutrality but as president he does not seem to be bound by the laws of the Association.

10. New York is entering on its fourth year of fighting this measure. These men believe that the proposed Compulsory Insurance is a menace not only to the worker, himself, but to the taxpayer and citizen and that it means the death blow to the practice of medicine. What support are they receiving from the Association and its official Journal? The Journal says that New York will be a good state in which to make a test and nothing more.

11. The Schenectady County Medical Society of New York has raised the issue squarely. They ask the aid of Michigan in finding out whom the officers of the A. M. A. represent. Is it the men who elected them to their offices or do they represent the American Association of Labor? Shall an Association be pledged to neutrality and its officers and Journal permitted to send out propaganda in favor of a measure which is being bitterly fought in many states?

12. "The strength of the wolf is the pack and the strength of the pack is the wolf." At best, this question of Compulsory Medical Insurance is of very questionable value to the American citizen, be he laborer, professional

man or ordinary citizen. It has worked out badly in many places where it was tried. In one country there were 1100 strikes of physicians; but be its merits or demerits what they may be, can we afford to let an Association and a Journal which has been built up by the efforts and money of the Medical fraternity be turned over to any association whether it be labor legislation or any one else without the consent of its members. This is what is being done to-day by the president of the A. M. A. and the propaganda sent out by the American Medical Journal.

13. To remain neutral, while the opposition smashes down defenses and builds intrenchments does not seem a very wise policy.

EXPLOITATION THERAPY.

In view of an editorial which appeared recently in the Weekly Bulletin of the Wayne County Medical Society, in which the statement is made, that due to the advanced newspaper notices and comments involving a claimed newly discovered chemical cure for cancer, and which cure had received serious official consideration from the society, through the appointment of a committee of investigation, such advanced press notices resulting in the author of the cure being overwhelmed with patients from all sections of the country, and to such an extent that it was an impossibility for him to properly demonstrate the success or non-success of the treatment to the long-suffering, but still receptive committee, it suggests itself to the Journal, that, in the future, not only in the interests of the profession, but also as a matter of safety to the public, in any consideration given officially to claimed discoveries or cures some restrictive and non-advertising method should be devised by which the inventor or author should be firmly held in a legal agreement that, excepting through legitimate research practice controlled by a committee, patients should not be treated or fees received by the author until such a time as the committee's report had been received and acted upon.

Until a method of treatment, or a claimed

curative agent, has been properly and conclusively passed upon by competent and recognized investigators, it would seem proper that the material rewards in connection therewith should be withheld until such a time as they could be esthetically received, and without violation of at least the spirit of section 3, clause 6, of the Medical Act, relating to "grossly unprofessional and dishonest conduct, which is declared to mean, (b) The obtaining of any fee on the assurance that an incurable disease can be permanently cured. The mere fact that no guarantee of cure is given does not change or modify the legal interpretation of the word "assurance." "Acts speak louder than words" is especially emphasized in court procedure. Certainly the "laborer is worthy of his hire," but in the history of ninety-nine of all heralded cures, the fee shortly precedes the death certificate.

It has been suggested, "Why the Rockefeller Research Bureau?"

In commenting upon the so-called cure, it is to be understood that in the absence of evidence, pro or con, no opinion is ventured as covering its merits. It is to be sincerely hoped that some effective remedy for CANCER has been discovered, in spite of the methods involved in its proof.

Editorial Comments

Our good friend, the Editor of the Indiana State Medical Journal, (and likewise the son of our own Dr. Bulson), ably comments upon the unnecessary removal of tonsils and teeth in our zest to obliterate all sources of possible local infection. The warning note sounded, while not new, is timely and to the point. Many tonsils have been removed, many teeth extracted without justification. Likewise in many of these cases the work has been so unskillful and incomplete that the patient is much the worse for it. Tonsillectomy and adenoidectomy is not a simple operative undertaking. It requires more than ordinary skill and a tonsillectomy to properly perform it so as to prevent leaving tags, stumps, damaged pillars and post-nasal trauma. Their removal should be recommended only for thera-

peutic reasons that have been clearly demonstrated by careful clinical study, and not primarily for a mercenary reason, which we fear has all too frequently inspired recommendation for the surgical attack. We join you in supporting those who utter timely warning against the ruthless removal of tonsils and teeth.

The 1920 Annual Meeting of the American Medical Association will be held in New Orleans during the week of April 26th. The faculty of the Tulane University join with the profession of New Orleans in assuming to arrange for a successful meeting and a good attendance. Are you planning to go?

The Grace Hospital Bulletin, Detroit, that suspended publication for a year on account of the war has again put in appearance. Seven excellent articles contributed by members of the Hospital Staff comprises this last issue of volume three. Those desiring to receive copies should write to the Superintendent of the Hospital.

We ask all our members to become acquainted with their senators and representatives. Learn to know them and go out of your way to do so. Later on in the year you are going to be asked to have a confidential talk with them. Just now we desire most that you cultivate their acquaintance.

According to our best available reports there remain not quite four hundred eligible physicians in this State who are not affiliated with our Counties and State Society. We purpose, if possible, to secure their applications this year. To accomplish this we call upon every county society and member to take such steps as will bring about their applying for membership. Go out after your associate, neighbor and fellow and tell him why he should join and invite him to your next meeting and so clinch your argument. If we all join to bring about this membership campaign it will be easy, short and sweet. Why not start today to round up the men in your county? Let's clean up the job in short order and wipe out our having to record 400 eligible non-members.

Every member should receive a copy of each number of the Journal. If you are not getting it the reason is you haven't sent in your change of address. We find in every instance where a complaint of non receipt of the Journal is made

that we were never informed of the change of address. The postal authorities do not forward second class mail matter and nowadays local postoffices are not keen to make deliveries where removals have occurred from one carrier's territory to that of another carrier. If you are not receiving the Journal send us your correct address. County Secretaries are requested to repeat this announcement to the members of their society.

Every once in awhile the query reaches us, "Now that 'Dakin's solution' has ceased to be a novelty and hobby what's next?" Who will make the guess. Interstitial Glands, Radium (that's pretty expensive). A pneumonia serum (sure to abort this time), a cancer cure—we give up for there is no telling what and where the new idea will be or appear. As to Dakin's we still hold that if more care was given to the first operative attention of the wound or injury there would be but little call for after "flushings" and dressings. There is no denying that infection may be reduced to a minimum per cent. if the right kind of care is given when the injury receives your attention the first time. An infection in a wound, seen by a doctor shortly after it has been sustained—one or two hours, is indicative of superficial and lack of thorough treatment and first dressing. The large majority, if not all, can be prevented by the right kind of care and treatment.

In this agitation against the Reds and the need of Americanization of our foreign population we must not be unmindful of the younger generation of children of this class of people. The principles of Americanism must be inculcated during their public school training. And incidentally, for the good of all children, it would beget a better coming generation if we would clear out from our public school teaching staffs all the curly-headed, wizened faced, soured, bespectacled old maids and matrons and replace them with young men. This, in order that our boys and girls may come in contact with virile American manhood and be the better men and women for it. Then, pay our teachers a living wage. There is need for a general shaking up of many of our schools and school boards.

"Yale Surgery Chair For Sale—Enquire * * *." This is a notice that was observed upon a certain Bulletin Board. We are wondering if the purchaser has the professorship conferred upon him?

From time to time criticism is directed against the efficacy of Roentgen Ray therapy in malignant disease. Most authorities agree that it is beneficial and should be employed in conjunction with the surgical procedure, especially following operative work. It is conceded, however, that it is not always productive of the same beneficial results. The explanation may lie in the fact that all the exposures, their time and frequency have not been uniform. Then too there has been a fear of a burn. To us it has always seemed that our Roentgenologists have been obsessed by this fear of a burn, especially when treating carcinomas of the mammary gland pre and post operatively. The intensity, length and frequency of exposure has been consequently limited to that extent—not to produce a burn. It seems to us that in supporting such a practice we are inconsistent. We recommend and achieve the bold sacrifice of involved structures and wide areas of surrounding fascia, muscles, lymphatics, vessels and if need be nerves. Then we draw up short and decry this additional agency for fear of the results of a X-ray burn. Many a thorough and splendid piece of surgery is limited in its end result because of failure to employ intensive X-ray therapy because a burn might result.

We incline to the practice of prolonged, intensive and frequent X-ray exposure following malignant or border line cases where surgical measures have been employed to remove the neoplasm and adjacent permeated areas. Let's have the burn, with all its annoyance and dressings if a reduction of mortality from malignant disease be attained. For this we should support our Roentgenologists and encourage them in overcoming the fear of burns—all of course providing it is demonstrated that effective dosage cannot otherwise be obtained. We are fully familiar with the difficulty encountered in treating these burns—they are, however, a lesser evil.

Will not our Roentgenologists rise up and discuss this feature of X-ray therapy. Our pages are at their disposal.

We have had considerable discussion regarding experiences of army surgeons with empyema cases that came under their care in Base Hospitals. We would welcome reports of their experiences that they are again encountering with cases of empyema arising in their civilian practice. Then may we have a comparison of pre-war, war and post-war results. The military experience—thoracotomy, Dakin's solution and a few other so-called, new-fangled procedures—have not established the final method for dealing

with empyema. Let the discussion be carried on until we reach a unity of opinion, if such be possible. Eighth and ninth rib resection posteriorly, two drainage tubes, posture, no irrigation, "Two bottle blowing lung exercise," may yet be the common ground upon which a majority will agree as being the most effective, efficient practice—Dakin's enthusiasts to the contrary.

We publish in each issue the advertising announcements of several reliable laboratories located in different parts of our state and in Chicago. They are so located as to be of easy access to the entire profession of the state. Individual doctors cannot be expected to equip themselves with the laboratory paraphernalia requisite for reliable, chemical, bacteriological, pathological and sero examinations—neither have they the time to perform these laboratory examinations. Such laboratory aid is requisite in reaching a proper diagnosis in a large number of instances. Therefore we urge that you patronize these advertisers in your Journal who are trained specialists and upon whose reports you may rely. You will find them all prompt, willing and ready to cooperate with you on all occasions. Give these advertisers your preference when sending out your specimens.

There may be something to this "Ground Hog Seeing His Shadow" myth regarding the weather. What we are in earnest about is that every doctor in Michigan shall see his own shadow and take an inventory of his present and future surroundings and prospects. We don't believe a single one wishes to see his shadow become so small that as an individual he becomes nothing more than a hireling and a "bureau employee." We urge that you now become vitally interested in the question of Public Health Insurance and counteract the propaganda that is being passed out by idealistic individuals. Your future rests upon the defeat of their program.

February may be a short month but your society has two meetings, possibly four, which you should not fail to attend.

County Secretaries when remitting State dues are requested to take particular pains to give accurate addresses of members. There have been many changes in location and removal to new offices. Unless we have the proper address we cannot assure delivery of the Journal. Please

aid us in correcting our mailing list by noting each member's present address.

A nurse, trained, receives \$25.00 to \$35.00 per week of 20 hour days. A girl in a brush, brass or other factory, untrained, receives from \$18.00 to \$33.00 per week of five and a half days of eight hours. The trained nurse works 140 hours per week, the girl in the factory works 44 hours per week. One spends three years in training, the other three weeks. Which one is underpaid? Which one is entitled to more pay? Do you wonder why more girls do not enter our hospital training schools or why it is so hard to secure trained nurses for private cases?

A goodly number of our local societies are holding splendid meetings with live programs. This is a very encouraging feature of organizational work for it arouses interest and inspires attendance. Michigan needs the interest and support of its doctors in Society work to maintain professional advancement and to secure recognition of professional rights. The work of obtaining cooperation rests with county officers and to these officers should go the credit for the end results and the benefits that ensue.

Attention is directed to our advertising section. Please note the new ads and also those of our old advertisers. Each one merits your patronage in preference to any other firm. Your cooperation is solicited in securing additional contracts and also to hold our present contracts and make advertising in the Journal valuable to all who purchase space.

Once again, your 1920 dues are payable. Please comply by prompt remittance to your County Secretary.

The indication and need of increased fees for professional services in these days of soaring cost of everything is imperative. It costs more to have a plumber come to a home to fix a faucet than for a Doctor's visit to attend a child with pneumonia. Which is the more skilled laborer? How long do you propose playing second to the plumber?

There is no law, movement or cult that will make an old plug equal to the thoroughbred, put them both side by side, on equal basis and cause them to go down the home stretch neck and neck. Think it over and see if the same thought does not apply to the human race in our propa-

ganda movements for labor equalization, socialism and a world safe for Democracy. In the present times when there exists such a mental and moral hunger for a plan or way out of the chaos that exists we need less of commissions, less legislation, less conferences. We do need more work, longer working hours, greater enforcement of laws, and a reverting back to the provisions of the Constitution upon which this Republic was founded. Autocracy begets tyranny. Democracy begets "mobism" and mob rule. A Republic is the safe and happy medium.

Elsewhere in this issue will be found the Minutes of the Midwinter Meeting of The Council. We urge that you read these minutes carefully and thus become informed as to the work of your state organization.

Dear Sir:

I am now writing to you for to see If you will Please send me A certificate for Practing medicine I have Practis for thirty-five years and i did also have a certificate till my House Burent and also my certificate Burent also and i Received my certificate from Doctor ----- and i did not Have it Recorded and the doctor I got my certificate from is dead and i do want to get another one from the United States, i do Want to RePly from the United States for all I can. and i do Doctor cronic Dezeses and i Doctor the Blood, Stomach, also i doctor the Nerves liver and i am a Stashneary doctor I doctor With Roats oils and Herbs and if you wish to know of my practice why you Can here from Mr. -----'s Drug Store at ----- Dr.-----

The above letter reveals we are not all surgeons.

Suppose the members of the American Medical Association should hold a convention at which they adopted a resolution demanding an increase of 60 per cent. in fees, a six-hour day, a 30-hour week, extra fees for overtime, and bound themselves to refuse to perform any service whatever for the public until these demands were complied with. Imagine the plight of the sick and injured, and measure if you can the state of public sentiment toward the American Medical Association.

Suppose the Retail Grocers' association should adopt a resolution binding the members not to sell an ounce of food to members of the American Medical Association or to anyone connected with them while the unreasonable demands

stood, basing their action on the ground, among others, that the attitude of the doctors menaced the life, health and comfort of the nation in general and the prosperity of the grocery trade in particular. Imagine the plight of the doctors' families, their wives and little children.

Suppose the farmers of the United States in convention assembled demanded an eight-hour day or less, thereby curtailing food production, and a price for their product which would raise the average pay of farmers to that of any day laborer, and suppose the farmers refused to sell a bushel of grain or a pound of fruit or vegetables until their demands were satisfied. What would happen to the city office workers, the flat dwellers and the myriads of men in mine, mill and factory?

Before the worst in the way of alimenation happened, civil chaos would ensue, anarchy would prevail, every man's back would be to the wall and survival would depend upon brute force. No man liveth unto himself. No man, however rich or poverty-stricken, but is dependent upon the service of his fellow men.

Flint, Mich., Journal, Dec. 20, 1919.

Correspondence

University Hospital, Ann Arbor, Mich.

CLINICS FOR PRACTITIONERS.

The Staff of the University Hospital announces a series of medical, surgical and special clinics to be given on the afternoon and evening of the second Wednesday of every month and the morning of the following day.

These clinics are intended to help practioners to keep abreast of new and interesting developments. Difficult cases will be demonstrated and discussed. An added feature will be a clinical-pathological conference on cases coming to necropsy.

The plan has been arranged to enable practioners to see the maximum amount of clinical material with the least expenditure of time and to carry out the policy of the Hospital to put its teaching facilities at the service of the profession.

Conferences will be held in the surgical amphitheater of the University Hospital unless otherwise stated. The schedule has been arranged with the view of allowing practioners to

make the best train connections in reaching and leaving Ann Arbor.

The exercises will start at 1:30 p. m., 7:30 p. m. and 8.30 a. m. The first conference will be held January 14th and 15th, 1920.

Christopher G. Parnall, M. D.
Director of the Hospital.

Chicago, December 24, 1919.

Dr. F. C. Warnshuis,
Grand Rapids, Mich.

Dear Doctor Warnshuis:

Thank you for your letter of the 22d inst., and for your offer. The problem of securing medical news from all except the very large cities is a very old one, and one which I have long ago given up all hope of solving. Every now and then we receive a criticism because we apparently are ignoring some particular city, or cities. In such cases we write to the critic asking for advice as to how we can get news, if he will be good enough to assume the task of sending it, etc., etc., etc. So far as Michigan is concerned, we have had correspondence with different men; they have promised to send items, and that is where it has ended. The fact is, for weeks at a time there may be no news worth reporting, and the individual who is supposed to represent the Journal and to be on the lookout falls asleep on the job, and when something happens he forgets all about sending it.

Except in the very large cities, where there is something happening—and these can be counted on the fingers of one hand—the only thing we can do is to depend on the clipping bureaus. We have five or six of these, and they cover the central states—especially Michigan—very well, at least we had thought so. There are, of course, some items of medical interest that would not be of interest to the public, which do not get into the newspapers. If only we had someone to report these when they occur, it would be ideal. Again thanking you for your letter, and with the season's greetings, I am

Sincerely yours,

George H. Simmons, Editor,
Journal of the A. M. A.
Alpena, Jan. 2, 1920.

To The Editor:

I am very much interested in the proposal of the State Society to give a sort of post graduate school of instruction in various centers. Alpena

wants to be in on this. I would suggest that a half-dozen of the best available men covering the different branches of medical science be arranged in a sort of Chautauqua tour and that they visit the various cities suggested, including Alpena, either for a week in June, or else that they come monthly. Nothing would add interest to the smaller societies as much as real instruction at regular meetings. The societies desiring to enter the scheme might show their interest by contributing \$100 towards the expense. The balance to be made up by the State Society.

The Alpena Medical Society is looking forward to a profitable year. Our new President, Dr. Geo. Lester, of Hillman, says we are to go over the top with a 100% membership; if so, you may expect another check soon for nine more members.

Truly yours,
C. M. Williams, Sec'y-Treas.

Jan. 12, 1920.

Editor M. S. M. S.,
Grand Rapids, Mich.

Dear Doctor:

In regard to your editorial article in the last number of our State Journal suggesting that the county societies should hold regular and frequent meetings. Does it occur to you that in some of the counties that such a thing is impossible after the roads are snow bound and with such poor train service?

In this, Benzie County, it is impossible to use our cars after the snow gets deep on account of the "high track" difficulties caused by the universal use of sleighs of narrow gauge.

If our State legislature would make it mandatory that all vehicles should be of a standard width of track it would allow cars to be used much later in the fall and much earlier in the spring and sometimes all winter long. Under the present system country doctors cannot render the service that the sick frequently need on account of impractical roads.

And further there is no point where we can all meet and return the same day by traveling on the railways as some of the roads do not even have daily service in the winter months

Respectfully,

E. J. C. Ellis.

Reply: We are not unaware of the existence of such obstacles in certain parts of our state. When the elements raise such obstacles and

State solons will not supply a remedy, of course, these societies are up against it. We urge, however, to go the limit in every county and hold as many and frequent meetings as possible. We appreciate the difficulties that exist.—Editor.

Deaths

Sir William Osler.

Sir William Osler died, December 29, 1919, at his home, Nordham Gardens, Oxford, England. He suffered an attack of pneumonia ('The Old Peoples' Friend') in October. This was followed by empyema and death. He was born at Bond Head, Tecumseh, Ontario, July 12, 1849. He studied at Trinity College, The Toronto School of Medicine and graduated from McGill University in 1872. He continued his studies in London, Berlin and Vienna. He was appointed Professor of Physiology and Pathology in McGill University. In 1884 he accepted the Chair of Clinical Medicine in the University of Penn. The following year he was chosen Galstonian Lecturer in the Royal College of Physicians in London, England. In 1886 he was Cartwright Lecturer in the College of Physicians and Surgeons, New York. In 1889 he became Professor of the Principles and Practice of Medicine in Johns Hopkins University. In 1904 he became Regius Professor of Medicine in Oxford University, Oxford, England. He was a F. R. S.

Doctor Osler was interested in everything pertaining to medical history and he was the possessor of a library of rare medical works. He wrote Osler's Theory and Practice of Medicine which has run into nine editions. He was also the chief editor of an elaborate system of medicine comprising a number of volumes. He was a prolific writer on medical subjects as well as philosophical ones.

Sir William Osler was magnetic and witty; and the possessor of a remarkable faculty for remembering names and faces. He was loved by his associates and by his students. He was a scholar, a great teacher and a wonderful clinician.

Doctor William M'Carroll died at his home in Pontiac, Michigan, December 12th, after an illness of several months.

Doctor M'Carroll was sixty-five years of age and was one of the best known older physicians of Pontiac. He was a graduate of the class of 1881 of the University of Michigan after which he returned to Pontiac where he remained in active practice up to about a year ago when his health began to fail.

State News Notes

COLLECTIONS.

Physicians' Bills and Hospital Accounts collected anywhere in Michigan. H. C. VanAken, Lawyer, 309 Post Building, Battle Creek, Michigan. Reference any Bank in Battle Creek.

FOR SALE—General Practice in best town north of Grand Rapids; One Thousand Population; Good Churches and Schools; High School on approved list; Good Roads; splendid farming country. My collections were over \$7,000.00 last year. Books open to inspection; opposition nil; nearest competition twelve miles distant. Any good man can do between \$5,000.00 and \$6,000.00 first year. District remarkably free from Hay Fever. Good hunting and fishing within one hour or less by auto. Also good perfectly modern 10 room house; good garage and barn, new, good office up town. All will be sold for about half the cost of house. Reason for selling: Owner wishes to Specialize. Address "Journal 104."

For many years it was comparatively easy for the laity to purchase narcotics. This produced many habitues of opium and its alkaloids and likewise cocaine. Very drastic legislation became necessary to curb this evil. One result of this is that physicians, who have always been very scrupulous in their use of narcotics, often find it quite inconvenient to prescribe what they regard as legitimate and entirely necessary amounts of narcotic drugs, particularly opiates.

Physicians, however, are coming to realize that opiates are more or less dispensable in many conditions where they have heretofore been considered necessary. They have been casting about for the most suitable substitutes that could be prescribed without restriction by law, that would not tend to habit formation.

In this connection it is gratifying to note the co-operation offered by Eli Lilly & Company in the way of a vest pocket reference entitled "Standard Anodynes, Sedatives and Hypnotics." In this edition there are more than ninety items mentioned which are non-narcotic, but which may be employed for anodyne, sedative or hypnotic effects. Others are listed which contain small amounts of opiates, but require a federal record of sale only. This booklet should prove very helpful to physicians generally, since it not only mentions products, but gives brief descrip-

tions of therapeutic application and dosage.

Physicians will profit by requesting copies of this booklet from Eli Lilly & Company, Indianapolis.

DETROIT BOARD OF HEALTH—CLINICS.

Veneral Division—

Station 1—33 Mullett St.

Tuberculosis Division—

Station 1—33 Mullett St.

Station 2—578 Wessen Ave.

Station 3—1257 Dubois St.

Station 4—36 Peterson St.

Station 5—529 Davison Ave.

Child Welfare Division—

Station 1—33 Mullett St.

Station 2—578 Wessen Ave.

Station 3—1257 Dubois St.

Station 4—36 Peterson St.

Station 5—529 Davison Ave.

Station 6—2313 Michigan Ave.

Eye, Ear, Nose and Throat Division—

Station 1—33 Mullett St.

School Dental Division—

Bishop School.

Children's Aid—33 West Warren Ave.

Children's Free Hospital—Brush & Farnsworth Sts.

Department of Health—33 St. Antoine St.

Detention Home—Hancock & Rivard Sts.

Ellis School.

Greusel School.

Garfield School.

Grace Hospital—John R & Willis Sts.

Harper Hospital—John R & Martin Pl.

House of Good Shepherd—Fort St. West.

Harms School.

Nellie Leland School.

Russell School.

John D. Rockefeller has recently given away \$1,000,000. Half of it goes to the Rockefeller Foundation and half to the General Education Board, also a Rockefeller institution. The major function of the Rockefeller Foundation has been to promote health. Its comprehensive activity is reflected first by the Rockefeller Institute for Medical Research. Then, in twelve States and indeed in fifteen countries, the Foundation has been battling the hookworm disease. Its experiments in controlling malaria through co-operation with the Public Health Societies

has brought convincing results. So have the experiments in the after care of infantile paralysis cases. The foundation is also campaigning against tuberculosis in France and against yellow fever in Ecuador. It has built a large and thoroughly equipped medical college at Peking and is beginning another at Shanghai. It grants about a hundred fellowships to foreign scholars who are pursuing courses in American medical centers. It contributed during the war some \$22,000,000 to war work agencies.

The Foundation's work is sometimes confused with that of the Carnegie Institution, founded to encourage general investigation, research, and discovery. The Carnegie Institution works specifically for the promotion of science while the Rockefeller Foundation is a fund by which Mr. Rockefeller has organized his benevolence.

As the first half of Mr. Rockefeller's latest gift will be used to combat disease, so the second half will be used to increase teachers' salaries. The donor will help them both body and soul.

The General Education Board has been aiding American institutions of learning by making contributions to their endowments conditional upon the raising of additional supplementary sums by the institutions thus favored. But this particular gift to it is to go for a very definite object. In these times of enormously augmented cost of living nothing is more evident than that salaries in the teaching profession must be increased if men and women are to remain in that profession and if younger men and women are to be induced to enter it. Mr. Rockefeller's provision to this end reads as follows:

"I should cordially indorse a decision to use the principal as well as the income as promptly and largely as may seem wise for the purpose of co-operating with the higher institutions of learning in raising sums specifically devoted to the increase of teachers' salaries."

As with the Rockefeller Foundation and the Carnegie Institution, so the work of the General Education Board and the Carnegie Foundation for the Advancement of Teaching are sometimes confounded. The latter institution has two distinctive functions, educational inquiry and payment of retiring allowances to college professors and of pensions to their widows. (The Outlook, Jan. 7, 1920.)

The members of the St. Clair County Medical Society by concerted action have increased their fees as the following announcement indicates:

St. Clair County Medical Society.

STATEMENT BY PHYSICIANS OF THE CITY

For the past three years, while the cost of all materials has advanced in an alarming degree, no class of merchandise has reached the high prices attained by medical and surgical supplies. And again the industrial growth and natural development of our city has caused large increases in office rents. Through all this period the physicians of the city have maintained their old schedule of fees feeling that prices would return to normal after the war. Since the close of the war the cost of things in general and especially prices pertaining to the upkeep and maintenance of a physician's equipment have steadily advanced. An analysis of the situation shows that the physician's overhead expense has increased over 200 per cent. in the essentials. For this reason it has been found necessary to readjust the schedules of fees so that after Jan. 1, 1920, the physicians of this city will maintain the following charges:

Day calls	-----7 A.M. to 6 P.M.	-----\$3.00
Evening calls	-----6 P.M. to 9 P.M.	-----\$4.00
Night calls	-----9 P.M. to 7 A.M.	-----\$5.00
Office consultations	-----	-----\$2.00

As most physicians utilize the forenoons for making their rounds, patients are requested to send in their calls early in the day so that the doctor may better systematize his plans thus facilitating his work and also allowing him more time to spend in his home. To be most efficient physician needs proper rest and recreation. If the public will co-operate in this respect by calling the doctor early in the day when possible, it will allow him to render more prompt and effectual service. In many instances calls that could have been sent in during the daytime are postponed until evening or late at night.

In real emergencies, however, the physicians will gladly extend as prompt service as possible whatever the hour.

The Wayne County Medical Society proposes to erect a bronze tablet in honor of its members who served in the recent war; and, that the Patriotic Committee, who has the matter in hand, may be sure to have a correct list of all members who were in service, will such members write the office of the Society—33 East High St., Detroit—to the effect they were in service, Army or Navy, length of time, rank, and whether overseas.

AMERICAN CONGRESS ON INTERNAL MEDICINE.

This organization, in conjunction with the American College of Physicians, meets at Chicago, February 23 to 28, 1920

The Sessions will comprise daily clinical and laboratory demonstrations in many of Chicago's leading hospitals and teaching institutions. There will be several evening gatherings. These will

be addressed by men eminent in American Medicine. One of the evening meetings will embrace the Fourth Annual Convocation of the American College of Physicians.

Hotel accomodations must be spoken for at once. Detailed information with regards headquarters, hotels, clinics, scientific demonstrations, etc., may be secured by addressing Dr. Frank Smithies, Secretary-General, 1002 North Dearborn St., Chicago, Illinois.

Dr. C. B. Gauss has located in Lansing.

Dr. Arthur M. Hume is devoting his whole time as inspector for the U. S. Public Health Service work among ex-soldiers. His splendid

organizational work has resulted in establishing an acting assistant surgeon or examiner in every county of the State.

Ethical Physicians of the United States and Canada who are interested in the advancement of what is best in clinical and scientific medicine and its affiliated sciences are cordially invited to attend all sessions of the American Congress on Internal Medicine. The gatherings will be of great practical and scientific worth.

Dr. Frank Suggs has returned from service and re-located in Highland Park.

Dr. A. C. Huebner of Bellaire has located in Ithaca.

COUNTY SOCIETY NEWS

It is the Editor's desire to have this department of the Journal contain the report of every meeting that is held by a Local Society. Secretaries are urged to send in these reports promptly

ALPENA COUNTY

The regular meeting of the Alpena Medical Society was held Thursday, Dec. 18, in the parlors of the Alpena House. Drs. Dunlop, Secrist, McKnight, McDaniels, Bertram, and Williams were present. The following officers were elected for the year 1920:

- President—Geo. Lister, Hillman.
- Vice-President—Samuel Bell, Alpena.
- Secretary-Treasurer—C. M. Williams, Alpena.
- Medico-Legal—W. A. Secrist, Alpena.
- Delegate—D. A. Cameron, Alpena.
- Alternate—Wm. Arscott, Rogers City.

We note that the State Society is planning on a sort of a University extension course for doctors. Alpena wants to be in on any such forward looking program, and invites the State Society to remember us in the selection of the centers. We have a good Hospital and will treat our visitors right.

C. M. Williams, Secretary.

GENESEE COUNTY

The Genesee County Medical Society met for noon luncheon at the Dryden Cafe Dec. 3, 1919, President Randall in the chair. Dr. Lafon Jones, of Flint, gave an interesting talk on "Acute Infectious Jaundice." He discussed the Epidemiology of the disease during its recent occurrence

in Flint and reviewed the newer theories of its Etiology and Pathology. Dr. F. C. Kidner of Detroit read a paper on "Peripheral Nerve Injuries and their Treatment." This was based on an extensive military experience and covered the subject in all its details. Rev. Fr. Patrick Duni-gan, of Flint, late Chaplain with the Over-seas Forces, was introduced and paid an eloquent tribute to the Medical Profession. He also reminded us of our responsibilities to our patients and to the community, begged us not to lose faith in our fellow man, and asked us to spread the doctrine of Good Cheer.

The Society again met on Wed., Jan. 7, 1920. Dr. C. B. Burr of Flint spoke on "The Value of Membership in the Medical Society." Drawing apt lessons from the recent war and from the industrial world, he showed the necessity for our profession to become better organized. This organization should be for our mutual benefit and should not be a detriment to the public. He stated that while everyone is actuated by self interest, yet it is expedient to be decent and to give the square deal.

Dr. C. H. Baker, Pres. of the State Society, briefly told us what the State Society was doing and outlined some of the plans for future activity. On account of pressure from the outside, it would be necessary for us to give our immediate attention to the subject of Compulsory

Health Insurance. He then read a paper on "The Principles of Cosmetic Surgery of the Face." This was well illustrated by lantern slides. The paper was discussed by Drs. Bird, Ballard and Bahlman.

The Genessee County Medical Society met on Wed. Dec. 17, 1919, Pres. Randall in the chair. Dr. J. G. R. Manwaring spoke on "The Future of Hurley Hospital." He presented figures which showed that the number of beds available in Flint was much below the average of cities of our size and estimated that we must have at least 500 additional beds within the next five years. He urged a proper standardization of hospital methods and showed the need of keeping proper case histories. He believed that all laboratory examinations should be free. He presented a most excellent plan for starting the training of nurses in the vocational department of the high schools.

Dr. Allison of Detroit, formerly resident physician of Saranac Lake Sanatorium, N. Y., and late Roentgenologist of Col. Blake's Hospital, Paris, France, was introduced and read a paper illustrated by lantern slides on "Types of Clinical Tuberculosis and the Differential Diagnosis from Diseases with which they might be confused." He urged a better correlation of the findings of the Clinician and the Roentgenologist and also the adoption of a better nomenclature. He demonstrated very clearly the dependable features of an X-Ray plate of the chest.

W. H. Marshall, Secretary.

GRAND TRAVERSE-LELANAU COUNTY.

At a meeting of the Grand Traverse-Leelanau County Medical Society held December 2, 1919, the following officers were elected for the ensuing year. President, Dr. J. W. Gauntlett, Traverse City; Vice-President, Dr. H. B. Kyselka, Traverse City; Sec.-Treasurer, Dr. H. V. Hendricks, Traverse City. Member of Medico-Legal Committee, Dr. J. B. Martin, Traverse City. Program committee, Dr. E. B. Minor, Traverse City.

Dr. Alfred C. Wilhelm of Grawn, Mich., reported an interesting obstetrical case, and Dr. Minor presented a case of a man with a subdeltoid bursitis.

H. V. Hendricks, Sec'y-Treas.

GRATIOT-ISABELLA-CLARE COUNTY

The December meeting of the Gratiot-Isabella-Clare was held at Brainerd Hospital, Thursday Dec. 11, at 2 p. m.

President Baskerville called the meeting to order. The minutes of the previous meetings were read and approved. Communications were read and disposed of.

The applications of Dr. C. F. DuBois and Dr. A. A. McNabb were received and referred to the board of censors, upon whose recommendation they were duly elected to membership.

The report of the Secretary was read and approved.

Dr. C. F. Pankhurst of North Star then read a very interesting paper on "Tonsilectomy in the Treatment of Bronchial Asthma." The Doctor has an autogenous vaccine made, with which he treats the patients after removing the tonsils. So far he has cured 18 out of 20 patients in this way.

The paper was discussed by every one present.

The following officers were elected for 1920:

President—E. T. Lamb, Alma.

Pice-President—C. D. Pullen, Mt. Pleasant.

Secretary—E. M. Highfield, Riverdale.

INGHAM COUNTY

At the Annual Meeting of the Ingham County Medical Society the following officers were elected for 1920:

President—F. M. Huntley.

Vice-President—F. J. Drolett.

Secretary-Treasurer—Milton Shaw.

Delegates to the State Society—B. M. Davey and M. L. Holm.

Alternates—Samuel Osborne and John G. Rulison.

Representative on Medical Legal Committee of State Society—B. D. Niles.

Milton Shaw, Secretary.

KALAMAZOO ACADEMY OF MEDICINE

The annual meeting of the Kalamazoo Academy of Medicine occurred December 9, 1919.

After the routine business, election of officers took place with the following results:

President—Walter den Bleyker.

First Vice-President—W. E. Collins.

Second Vice-President—L. E. Wescott.

Third Vice-President—Malcom Smith.

Treasurer—Dan H. Eaton.

Secretary—B. A. Shepard (elected 1918 for 3 years.)

Librarian—Blanche Eppler.

Censors—W. A. Stone, A. L. Robinson.

Delegates to State Society—Drs. R. E. Balch, G. F. Young, O. D. Hudnutt.

Alternates—Drs. Della P. Pierce, C. H. McKain, J. Van Ness.

The following Scientific Program was then carried out.

1. "Some Aspects of the Examination of the Heart."

Dr. R. C. Bardeen, Madison, Wis.

2. "Renal Tuberculosis."

Dr. Hugh Cabot, Ann Arbor, Mich.

The afternoon program was followed by a banquet at the Park-American Hotel in honor of the members of the Academy who were in Government Service during the War.

There was a large attendance, both at the afternoon meeting and banquet. "One of the most interesting and profitable days" was the expression of a goodly number.

B. A. Shepard, Secretary.

MECOSTA COUNTY

I am pleased to hand you herewith a check for \$52.50, in payment of 15 members of Mecosta County Medical Society, to the State Medical Society, whose names are on the enclosed separate sheet.

At a recent meeting of our Society, the following officers were elected for the ensuing year: Pres., B. L. Franklin, Millbrook; 1st Vice-Pres., G. H. Yeo, Big Rapids; 2nd Vice-Pres., J. B. Campbell, Stanwood; Sec. & Treas., D. MacIntyre, Big Rapids.

A new fee schedule was adopted at this meeting, which materially increased the fees along certain lines, principally of which was country mileage and obstetrics. Hereafter mileage in the country will be one mile straight. Obstetrics \$25.00, including preliminary urinalysis, and one after visit. Mileage extra if in the country. City calls \$2.00, and \$3.00 night calls. Office visits \$1.00 and upward.

It is the intention of the Society to hold frequent meetings, at which time papers on various subjects will be presented, also clinical material. It is the desire of the Secretary to create a greater interest in the meetings of the Society than has been manifested in the past, and I heartily ask your co-operation.

Donald McIntyre, Secretary.

Miscellany

FRACTURE OF THE FEMUR: THE APPLICATION OF WAR LESSONS TO CIVIL PRACTICE.

By Carleton R. Metcalf, M.D., Concord, N. H., Lieut-Col. M.C., U.S.A.; Ann. of Surg., Vol. LXX, Nov., 1919, No. 5.

Fractures of the femur may be arbitrarily divided into four groups: (1) Intracapsular; (2) Upper third; (3) Middle third; (4) Lower third. In these several groups we find specific deformities which must be counteracted.

1. Intracapsular—In war clinics one rarely sees impacted fracture of the hip. We have dealt with loose fractures in healthy young adults.

Deformity—Upward dislocation of the femur. In neglected lesions there has been persistent abduction of the thigh. To counteract: Thomas splint. Traction, with thigh on abduction to 35 degrees and in flexion to 30 degrees. In this position the foot naturally rotates outward slightly and should be so held. After overriding has been corrected immobilize in a plaster spica. This is analogous to Whitman's treatment for impacted fracture of the hip.

2. Upper third. a. Fracture Just Above the Small Trochanter.

Deformity—Upper fragment abducted. (Glutei pulling on great trochanter) (2) Upper fragment not flexed. (Insertion of ilio-psoas is below site of fracture.) (3) Lower fragment drawn upward, inward and slightly forward. (Composite effect of extensors, abductors and flexors on thigh.)

To counteract: Straight traction in abduction.

b. Fracture Just Below the Small Trochanter.—Common type of fracture.

Deformity—Upper fragment abducted. (Glutei pulling on great trochanter.) (2) Upper fragment flexed. (Ilio-psoas.) (3) Upper fragment rotated outward. (External rotator group—obturator, piriformis, gemelli and quadratus more than counteract anterior portions of gluteus medius and minimus, tensor fasciae femoris and ilio-femoral ligament.) (4) Lower fragment drawn upward and inward. (Composite effect of extensors, abductors and flexors of thigh.)

To counteract: Thomas splint. Traction, with thigh in flexion to 30 degrees and in abduction (about 35 degrees) until the lower fragment has been brought into alignment with the upper. Flex knee 25 degrees. Support the lower frag-

ment posteriorly to prevent subluxation. Utilize "screw pads." They are attached to longitudinal rods of the Thomas splint. If outward rotation is not overcome by the vertical pressure of the ring of the Thomas splint, it can be compensated by rotating, to a like degree, the lower fragment.

c. Oblique Fracture, Downward and Inward, Below the Small Trochanter. Deformity.—Upper fragment flexed but adducted (in distinction to the abduction of the two preceding types) by the pull of the adductor muscles inserted near the small trochanter. To counteract: Thomas splint. Traction, with thigh flexed and adducted to bring the lower fragment into alignment with the upper fragment.

3. Middle Third. Deformity.—(1) Lower fragment drawn upward. (2) Lower fragment tilted slightly backwards. (Gastrocnemius.) To counteract: Thomas splint. Traction. Correct subluxation by posterior support. Utilize "screw pads" for insistent pressure on either side of the thigh

4. Lower Third. Deformity.—(1) Lower fragment tilted backward. (Gastrocnemius.) (2) Lower fragment slightly adducted and slightly rotated outward. (Adducted magnus).

To counteract: Traction, with the knee flexed from 35 to 90 degrees. It is necessary to have firm support behind the lower fragment, especially if traction is made by some means other than calipers.

The deformities which one must guard against particularly are four in number:

1. Excessive shortening, because of inadequate traction or poor position or both. A good result entails shortening of less than one inch.

2. Subluxation of the shaft, because of inadequate posterior support.

3. Rotation of the lower fragment on the upper, with the result that a patient ultimately toes out or toes in.

4. Abduction of the upper fragment.

The Thomas splint serves as a foundation stone in several methods of treating fracture of the femur. Whichever method one employs, a few fundamental facts must be observed:

1. The size of the ring of the splint is not a vital factor, so long as it be large enough. A snugly fitting ring is preferable but not essential.

2. The posterior portion of the ring should impinge against the tuber ischii.

3. This intimate, unchanging contact can be procured only when there is a vertical pull on the ring.

4. The distal end of the splint must be elevated.

6. The Thomas splint should be bent in slight flexion at the knee—ordinarily to about 25 degrees from a straight angle. This amount of flexion is to be increased in fracture of the lower third of the femur.

7. A foot-piece may be erected to hold the foot at right angles.

8. Posterior support is had by double strips of flannel bandage running behind the limb, from one side-rod to the other.

9. Traction is procured by weight and pulley. The initial weight should be the maximum.

10. If pull and proper position do not suffice to secure alignment, employ "screw pads."

11. Leave the knee free and uncovered. Massages of the joint minimize the probability of final knee-joint disability.

12. Examine the splint daily. Adjust the flannel slings, check traction and position. Measure the length twice a week, but do not disturb the fracture needlessly. Check alignment and callus formation with X-ray pictures; a bedside machine is of great help.

13. Watch the perineum. Soap the ring before applying the splint, and soap it daily thereafter. Pearson passes between the ring and the skin a prepared strip of calico, boiled in soft soap. Rub the patient's back with alcohol.

14. Teach a patient some occupational work—knitting, basket-weaving, painting or the like—to busy him during his protracted confinement.

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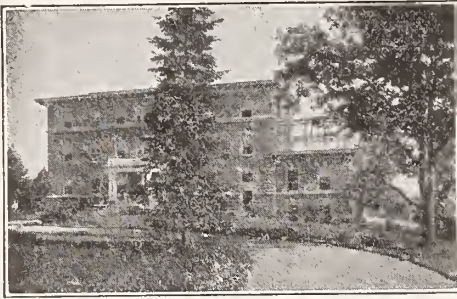
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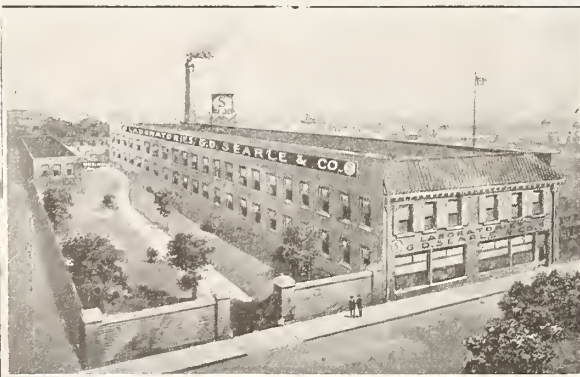


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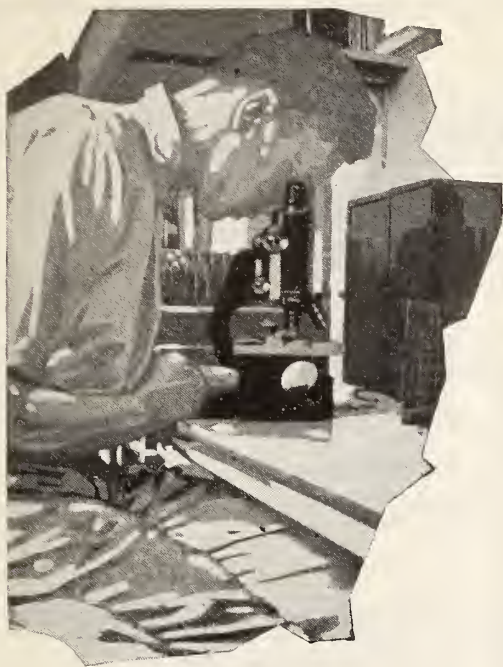


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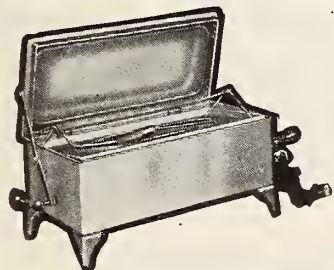
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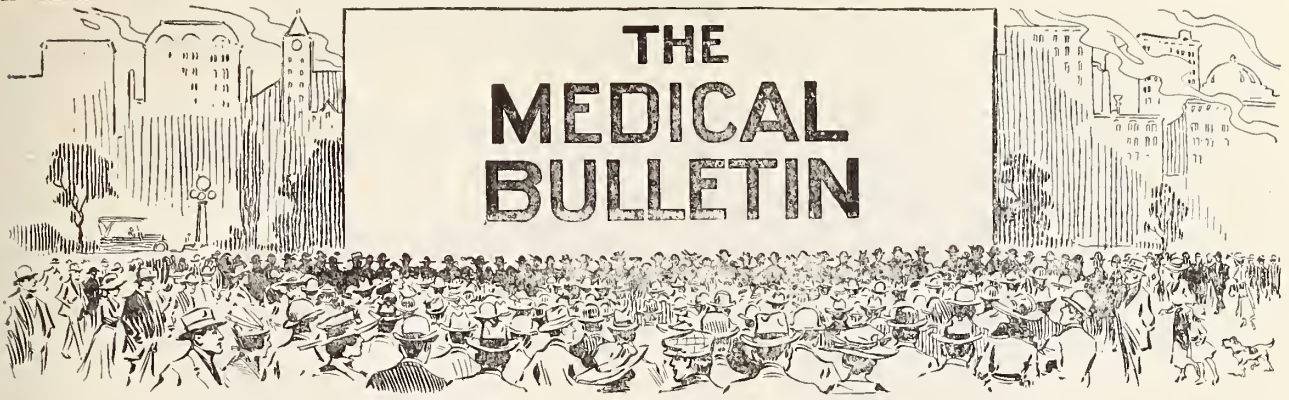
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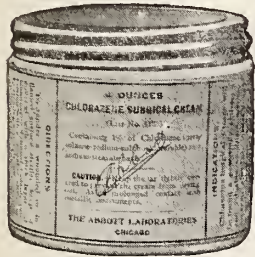
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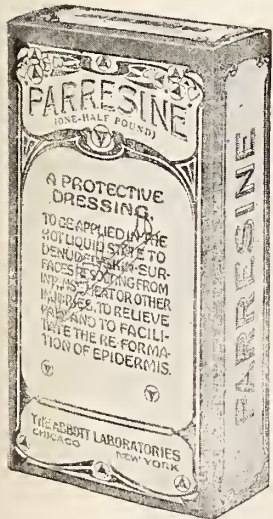


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Vol. XIX

GRAND RAPIDS, MICHIGAN, MARCH, 1920

No. 3

Original Articles

INDUSTRIAL SURGERY AND ITS SIMILARITY TO WAR SURGERY.*

H. N. TORREY, M. D.

DETROIT, MICH.

Industrial medicine and surgery is fast taking a most important place in the realm of medicine. The industrial army is far larger than our A. E. F., and its casualties in dead and wounded are far greater. The employer and employee are demanding better medical and surgical attention than ever before. The profession has heard the call—six medical schools have already installed departments in industrial medicine and surgery—medical men everywhere are realizing that this field is a specialty and are preparing themselves for this work. The following quotation from an authority on this subject shows how enormous the field is:

- A: Plant sanitation.
- B: Prevention of occupational diseases.
- C: Prevention of accidents.
- D: Health supervision of employees by (First) physical examination; (Second) Examination of applicants; (Third) Educational propaganda; (Fourth) Prevention against contagious disease.
- E: Surgical care of injured.
- F: Supervision of medical treatment.
- G: Care of tuberculosis, syphilis, etc.
- H: Visiting nurse, social service.
- I: Improvement of home conditions.
- J: Improvement of community conditions.
- K: Co-ordination and co-operation with all forms of welfare service in industry.

The industrial man-power of the nation must be conserved and utilized to the last advantage. The employer finds, aside from the humanitarian aspect, that it pays to take care of his men—he joins hands with the employee in demanding the best medical service. The

Government and State are interested, and all look toward the medical profession. The profession has handled this problem before, but now prepares to handle it in a far better, more scientific and systematic manner. Our recent experiences in the War have lent much impetus to this work. As it required additional training for the civilian surgeon to be a war surgeon, so will it require additional training and experience for the civilian surgeon to be an Industrial Surgeon. I have been much impressed since my return from France by the many points of similarity between War Surgery and Civilian Surgery, and more especially Industrial Surgery. I have been much interested also in applying the lessons I learned abroad in my industrial work, and the results even in this short time have been most gratifying.

Owing to the small amount of time allotted to this paper, I can go into the subject in only a general way.

First and foremost in Industrial Surgery, it is as important as in War Surgery to get the man back in the Line as quickly as possible, and in the best possible condition. The wounded man must be cared for quickly and efficiently in the First Aid Station (or the factory). He must be properly splinted for transportation, and finally upon arrival at the Evacuation or Base Hospital, he must have the benefit of the most approved and up-to-date methods and equipment. Briefly, and under the following heads, I wish to show how some of the War lessons may be applied to the problems of Industrial Surgery.

WOUNDS.

Industrial wounds, while as a rule much less severe and much less contaminated than those in War, are fundamentally the same and yield even more readily to the same treatment. Debridement or mechanical sterilization by removal of the macerated tissues and foreign bodies, hemostasis, followed by primary suture is sufficient for a large percentage of these wounds.

I wish to add one word of warning regarding primary sutures. Do not make them ex-

*Read before the Wayne County Medical Society, September 29, 1919.

cept under ideal conditions unless you can keep in touch with the case. Should the wound become infected, Dakinize, later doing a delayed suture or secondary suture, depending upon the results of the bacteriological examination. We have found that the clinical aspect of the wound is not always a safe guide as to the time for secondary suture. The wound infected with a hemolytic streptococcus, many times looks very well clinically, but it will not heal following secondary suture. The bacteriological examination, together with the clinical condition is the ideal method. In this connection I wish to call attention to the large amount of time lost in many cases in which we allow wounds to granulate and heal. This long period of granulation and healing can in most cases be avoided by secondary suture, thus saving a great deal of time and giving a much better result. Both of these factors are naturally of great importance in Industrial Surgery. Granulating wounds and burns are best treated with one of the paraffin dressings.

FRACTURES OF THE LONG BONES.

Four lessons in Bone Surgery taught by the War were especially impressed upon me. (First) The excellent results in the majority of cases which can be obtained by mechanical measures properly applied and painstakingly followed up. With this technique, the number of cases left for open operation will be very small. (Second) The closure of wounds in compound fractures, thereby making simple fractures. (Third) The restoration of function and reconstruction. (Fourth) Joint Surgery.

I need not say that all the points enumerated above are new; but never before have we had such an opportunity to prove out a method, old or new, and to observe results in such a large number of cases. I will take these points up now in a little more detail.

In regard to the mechanical treatment of fractures, I feel that we are especially indebted to our orthopedic brothers for the further development in this line of treatment, and for the demonstration of what can be done with it. I feel personally that I have been rather impatient in my fracture work, and rather prone in some cases to operate my fractures without giving the patient the full benefit of the best mechanical treatment. By mechanical treatment, I do not mean applying the Thomas or any other splint in any condition, but the proper utilization of mechanical measures, these measures to be followed up with the greatest care day by day and the results checked

up at the same time with very frequent radiographs. Splints, Balkan frames, etc., which have been developed during the War should have a wide use in Civilian Service, and we have already found them of great value in our Industrial work. In the Surgical Service of the Michigan Mutual Liability Company, besides using the Thomas splint in our treatment work, we are also equipping all our First Aid Stations in the large factories and our ambulances with these splints. In this way, our patients will be transported to the hospital in the best possible condition. (For those interested a list of these standard splints together with the directions as to their use can be obtained from the Surgeon General's Office.) In selected cases, the ice tongs or callipers are of great value—the Chutro stirrup also has many advocates.

It is not within the scope of this paper to deal with the great advances and the value of the X-Ray in War Surgery. I wish to call attention, however, to the great aid in finding foreign bodies which the improved technique gives us. It might also be of interest to know that Dr. P. M. Hickey and myself are at present working upon an improved fluoroscopic table, by means of which fractures may be reduced by mechanical means under the observation of the fluoroscope.

In my service at Harper Hospital and the Michigan Mutual Hospital, we have a series of compound fractures which we have converted into simple fractures. The result I hope to report later. I may say at this time, however, that our results have been most gratifying. Our technique is as follows: As soon after the fracture as possible, the wound is carefully explored, the macerated tissues and foreign bodies removed, flushed out with ether, and closed with primary suture. A retention splint or a small amount of extension is employed. Special care is taken not to add to the trauma, and the part is left at rest until healing of the wound has taken place. As soon as the healing has taken place, the problem is greatly simplified; and the case is handled like any other simple fracture. The patient is carefully watched during this procedure and should infection develop in spite of all precautions, the wound is at once opened freely and the Carrel-Dakin treatment given.

Osteomyelitis is treated by wide incision and drainage—draining both the soft tissue and bone, thereby allowing the Dakin's solution access to all infected parts. Later the bone

cavities can be filled with muscle or fascia and the wound closed by secondary suture.

Restoration of function does not necessarily follow bone union. Judicious mobilization of fractures, and not complete immobilization, is the treatment aimed at. The fracture should be so splinted that the bones are in proper position, and yet at the same time exposure is left for massage and in certain cases for passive and active motion. This is especially important in fractures of joints, when movement must be started early.

Joint surgery shows many advances. In brief, the treatment consists of the debridement, complete closure of the joint and motion. Infected joints show the most astounding results following this mobilization treatment.

Reconstruction and re-education of the crippled for other lines of work, and other post-war measures are of great interest, and of the utmost value to Industrial Surgery. The subject is too large a one to go into this paper, but I feel that we should note carefully any advances in the work, and apply them to our Industrial work.

ABDOMINAL SURGERY.

I was especially fortunate to have had considerable experience with gun shot wounds in the abdomen. Our results were fair, the prognosis depending upon the time elapsed since the injury and as to what portion of the intestine was injured. We found that lesions of the large intestines meant a higher mortality than lesions of the small. The treatment consisted of free exposure, repair of the lesion, dry sponging and closure of the wound, except in those cases of extensive contamination of the abdominal cavity.

THORACIC SURGERY.

We learned from our experience that the lung could be freely exposed and could be easily handled—that empyema could be cured by repeated aspiration in some cases. When a rib resection was necessary, the pleural cavity was Dakinized and when bacteriological examination indicated, the opening was closed by secondary suture, and a long convalescence avoided.

Advances were made in the treatment of shock, and in blood transfusion. Every up-to-date Industrial hospital should have shock beds and the treatment of shock and of blood transfusion should be second nature to an Industrial Surgeon. Antitetanic measures should be more emphasized in Industrial work than ever before.

In closing I wish to say again that Industrial Surgery is fast becoming a specialty in the field of medicine, and that the coming Industrial Surgeon will be especially trained and experienced in this work, and last, but not least, he must utilize in this work the lessons and principles developed by this great war.

WOUND SHOCK.

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The importance of traumatic shock as a complicating factor in wounds and surgical conditions, and its obscure nature led a number of men in France to investigate causes, and particularly to institute rational methods in combating it.

There have been many and divers theories put forth to account for it. These difficulties lay not only in the peculiar nature of shock, but in its attendant conditions such as shock and sepsis.

It is not the purpose of this paper to go into all the theories and lines of investigations followed. We will only give a few which, to our mind, have some bearing on the nature of shock.

1. The blood changes. The first peculiarity of the blood in shock is the high capillary count. When hemorrhage is a complicating factor, these high counts are striking, indicating a concentration of blood at least in the superficial capillaries. The difference of the capillary to the venous count was very marked, amounting to over 2,000,000 in some cases and in nearly all to over 1,000,000. The difference between capillary and venous count is further confirmed by haemoglobin estimations. These differences were from 7 to 20%. Shock is frequently complicated by hemorrhage. In these conditions the capillary count may be low. But when a comparative count is made with the venous blood the difference is very obvious.

We used to hear—In shock a person bleeds into his own abdominal veins. Surgeons testify that on manipulating the peritoneum that they could produce shock. But this is not primary shock. We did not notice this splanchnic congestion on cases in shock along the Western front.

Therefore we believe that this "lost" blood is in the capillaries; i. e. that there is a capillary stagnation.

2. Cannon worked on the theory that an important factor in shock was an acidosis and instituted treatment towards combating acidosis. Now Cannon had a wide experience and at the Laboratory at Dijon, he demonstrated on animals that there was an acidosis in shock. He says—"There is evidence that acid or a change in the blood in the direction of acidity is observed, and has a depressive effect on the blood pressure." He believes that the trauma causes a breaking down of muscle tissue with an increased outpouring of sarcolactic acid into the circulation, which uses up the available CO₂ and consequent acidosis. From this it would be expected that by the injection of large amounts of Bicarbonate of Soda solution one would overcome the state of shock. But this did not work out in practice. In common with several workers we infused large amounts of Sodii Bicarb 4% solution, intravenously and could not observe any beneficial results aside from the benefit they got from the water. We could not see that it raised the blood pressure per se or lessened their state of shock. Finally we discarded its use altogether. We think, and we think Cannon also believes, that any acidosis these cases have, is a result rather than a cause.

3. Acapnia Theory of Yandell Henderson. These workers went on the theory that a reduction of the CO₂ of the blood was a causative agent. They produced low Blood Pressures in animals by vigorous artificial respiration, and said that the lowered CO₂ content was the main thing in producing shock. But this is not the picture of men in shock. Deep respirations are necessary to cause a marked diminution of CO₂ in the blood and in shocked persons they usually breathe very shallow.

4. Then there is the shock that is noticed after removing a tourniquet that has been on for some hours. This was noticed in several cases.

There are many other theories to account for this thing we call shock. Some of them are Fat Emboli, the Adrenal exhaustion Nerve exhaustion and others.

We do not know the prime causative agent in shock, but we do believe that there are many important factors involved. We do know that these people have pain, and that at times their tissues are devitalized. We know that for some reason or other that there is a stagnation of the venous flow, and a low blood pressure, very low, indeed, at times. Fatigue and lack of proper food, or entire lack of food for days, living in the open and in the wet, living under a severe nervous tension was the lot of

most of the cases we dealt with, and we believe that these prior conditions entered as an important factor. Then too, there was the transportation over shell torn roads, and we know that many cases left the field hospitals in good shape, only to arrive to us in a very grave state. This was particularly true of the compound fracture thigh cases.

As to types of cases we would say from our series that the most profound cases came from injuries of the back. Our mortality from this class was 58.06%. Our mortality in abdominal cases was 52%, and compound fracture cases ran to 36.58%. The chest injuries did not suffer to the same extent as the others from shock. Head injuries involving a fracture of the skull did not present a picture of shock as we understood it. They had a high blood pressure and usually a very slow pulse. Another very noticeable thing was the degree of shock persons had who suffered from multiple wounds of the soft parts, i.e. torn muscle tissue. Of 32 cases of this type, our mortality was 41.01%—rather high.

The Blood Pressure. For a long time this was our greatest prognostic factor and also our criterium as to what form of treatment the patient received. Even yet we believe a knowledge of the blood pressure to be extremely important, and should be known in all cases. We only considered the maximum pressure. We found the spring instrument satisfactory and used the Tycos, Sanborn and others. Blood pressures in some cases were unbelievably low—40-50mm systolic—and sometimes we couldn't record them on the instrument. 80 mm systolic sustained for an hour was the minimum of permitting operation. In a few cases with extensive gas poisoning, operation was permitted earlier, but preferably under gas-oxygen anaesthesia. Ether always causes a drop in blood pressure and in cases where the pressure is prone to be low, it is unwise to give ether. Cases where the pressure was below 60mm. and could not immediately be raised were hopeless. At 40mm, nothing could be done as these poor fellows were doomed from the beginning.

Treatment. What can we do for shock? What are our criteria for various methods of treatment? In spite of some of the obscure causative factors, what are broad rational rules for treatment? When should we and when should we not use blood from another? And what further criteria can we gain. These are pertinent questions to answer.

To quote Cannon—"Whatever the nature of the bodily changes which underlie the state of shock, it is evident that the circulatory

functions are in a precarious condition, and that the heart, nervous system and other organs are suffering from an insufficient blood supply. Everything should be done to promote the factors favorable to the restoration of a normal and stable blood flow and anything unfavorable to such restoration should be scrupulously avoided."

Warmth by the hot water bottles, or the hot air frame, and plenty of warm blankets are essential. In cases of moderate shock, the placing of several hot water bottles together with plenty of blankets suffices for warming them. These bottles should be placed at soles of feet, and between the thighs and between the arms. One should be placed on the abdomen and both hands caused to rest on this bottle, thus giving warmth to both palms.

If the case was severe, we used a hot air frame such as is used in sweating nephritic patients, with the exception that they were closely watched to prevent sweating. Perspiration, obviously would be bad for these cases as they already had lost too much fluid. We used an alcohol burner with pipes leading into the frame and many blankets thrown over the frame so that we had a minimum dissipation of heat.

Although these patients are prone to vomit, it is well to insist on plenty of fluids by mouth, either in the form of hot coffee, hot soup or water. They should also receive fluids by rectum, and especially so if it can't be retained by mouth. Quarts of water is what they need; not cupfuls.

As to the use of drugs there is not much to say. The one great drug is morphia, of which all our cases received liberal doses. It does stop pain and, we believed, aided in equalizing the circulation. The French used a good deal of Camphor (5cc in oil). We used it for a time, but its results are variable and uncertain. The same would apply to Digitalis and Pituitrin. We thought it good therapy to use them, but did not consider them in the same need as fluids.

This brings us to the question of intravenous infusions and transfusions which were extensively practiced along the Western front by officers having charge of this kind of work.

We had been taught that the infusion of normal saline caused a rise in blood pressure, which after a time would fall even below its original figure, due to a too rapid elimination by the kidneys of the saline, with a consequent greater concentration of the formed elements of the blood. This was true on animals in experiments done at the laboratory at Dijon.

So they tried to find a fluid which could be infused without too rapid elimination and which was of a similar viscosity of the blood and which would raise the blood pressure and sustain it. They finally used a solution of 6% Gum Arabic in normal saline. For a while thousands of infusions were given and then a storm of protest arose. These officers said that it caused severe chills, lowered the blood pressure and in many many cases was positively harmful. There was merit to these protests as we had a similar experience. But about the middle of August, 1918, our laboratory started making our own gum saline and our chills ceased and the patients had a sustained rise in blood pressure other things being equal. Our reasons for this change in action was argued thus: That the material we used from the central laboratory at Dijon was too old when we received it, that it invariably had a precipitate, and was unsterile. When from our own laboratory we could get a solution made the same day that it was used, when we knew it was sterile, and could positively not have any precipitate, at once our results were good. We now believe that gum saline properly made and used has a distinct place in the treatment of shock. It was our custom to infuse 500-1000cc, sometimes repeated in an hour or so. We believed it a most valuable adjunct in combating shock.

Blood transfusions are a remarkable thing and should be used as a routine if possible in all cases of traumatic shock when one is not in a position to gather definite criteria for other methods of treatment. Remember that a patient does not have to lose much blood or any blood, for you to make your decision. Remember that a blood transfusion properly given is the one great method of combating shock. But it should be properly given. It doesn't matter what method of transfusion you use provided that you are thoroughly familiar with the technic of that method.

We used the Sodium Citrate method and found it eminently satisfactory inasmuch as it could be transported. Care should be made not to roughly agitate the container as it will destroy red blood cells and the platelets. The blood grouping is important and should be made in all cases.

About Oct. 1, 1918, Lee, of Boston, suggested to us that we gain more information by finding out the existing blood volume of the patient. He said, "It is obviously desirable to gain as much information as possible concerning the blood volume and the oxygen carrying constit-

uents of the blood. The Hb estimation and red blood count give only the % in the blood volume at hand. Absolute data can be obtained in the followed in the following way—If a haemoglobin or a RBC or both be made and then a known amount of fluid be injected and then the blood estimation be repeated, one has in the reduction of the Hb or RBC by a known volume of fluid, a formula by which the total blood volume can be reckoned.”

“The simplest example of this would be an Hb of 100% immediately before an infusion of 500 cc of fluid which was reduced to 75%.

In this case 500cc caused a 25% reduction. Therefore 500cc was $\frac{1}{4}$ of the blood volume which was 2000cc after the addition of 500cc of fluid. The normal blood volume of a large man may be calculated at about 6000cc. Consequently in the example above, the case's blood volume was $\frac{1}{3}$ of normal and his total Hb was neither 100% nor 75% but $\frac{1}{3}$ of that or 25%. It is believed that a reduction below 60% is dangerous and that a dilution of the relative % of Hb below 25% is not only dangerous but very difficult to maintain since the bodily mechanism will get rid of fluid in order to maintain that level.”

So now we found that we had criteria (1) as to prognosis, (2) as to remedial measures.

(1) Prognosis—We found all cases, no matter what the type or extent of wound, who had a blood volume under 3500cc had a hard time pulling thru, and if under 3000cc they all died. If the Hb was under 40% they died. In some cases that looked hopeless and we found a blood volume of say 4200 cc or more, and an Hb of 50%, we found that in nearly all these cases we could pull them thru. Our prognosis by this method rarely failed us, barring of course the cases of gas toxæmia.

(2) Remedial measures—If Hb was below 40% and blood volume below 4000 cc, blood trasfusion was demanded.

If Hb was below 40% and the blood volume was below 3000cc or 2500cc, blood transfusion was of no avail and would be wasting blood. These cases were doomed.

If Hb was over 50% and blood volume was over 4200cc, blood transfusion was not needed, but fluids other than blood such as gum saline, etc.

So now we felt that we had a method of giving us much information in spite of our handicaps in our lack of knowledge of causative agent or agents in shock.

THE CANCER QUESTION.

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The results obtained in cancer cases have been at a standstill for some years.

Cancer itself is apparently increasing.

One in every seven people now die of cancer.

Of all cases operated upon for the cure of cancer, we probably cure less than 15%.

These facts justify us in stating that there is a cancer question and that it is a most important one.

While we still lack much desirable knowledge concerning this disease we have a fund of things we do know which justify us in hoping to lower its death rate.

A summary of a few simple facts which bear directly on the cure of cancer may be given as follows:

1. Cancers are all local in their origin and hence theoretically all are curable if accessible.
2. Cancer is not contagious.
3. The occurrence of cancer is not markedly influenced by heredity.
4. Early cancer is not painful and only calls attention by a change in form or function.
5. The majority of cancers are so located that early presence is made known by suspicious objective symptoms.
6. Cancer kills through its limitless spread by direct invasion of adjacent structures and by metastases, hence its cure necessitates that it be attacked before such extension makes its removal or destruction impossible.

In the treatment of cancer just as our results are at a standstill so are our curative measures. Our surgery is as clean and as radical as we well can make it, there are no new methods superior to our old ones for this work, serums are as yet a failure here and radium and the X-Rays have but a limited use in this field and only in skilled hands. The only cures we have had in the past and that we may expect in the future so far as we can foretell, have come from the active destruction of the total growth in place or by the total removal of it from the body.

As no improvement in our treatment seems available we must make our present methods more efficacious and to that end we must get the cases earlier. All authorities are deeply impressed with the necessity for this and organizations are being formed to promote this change by educational measures.

It would seem that this educational program should have three objects, viz.—

1. Education of the laity to understand the nature of cancer, its curability, its early symptoms, and the necessity for early treatment.

2. Education of the physicians generally to *suspect cancer always, to diagnose it sooner, and to forever insist on immediate treatment.*

3. Education of the surgeon to treat these cases to the best advantage for the patients generally as well as individually, and, what is most important if results are to be obtained, *to lead the surgeon to drive home the propaganda he is backing by the results he gets.*

While all this is going on we anxiously await light from the laboratory but we must not diverge from our course to try every proposed remedy put forth and waste our patient's time, which is his most valuable possession, when cancer attacks him.

Nearly all cancer victims give a history of a long course of observations and experimental treatments after the growth is first noted before coming to radical measures. In that period of delay somewhere passed the opportunity of a cure being obtained.

To operate 100 cases of cancer and have 90 die of cancer produces 90 circles of skeptical friends and relatives who believe surgery to be ineffectual to 10 circles who have faith in such measures. This preponderance of pessimism means that other cases will naturally hesitate longer and try everything else before surgical assistance is sought.

Theoretically at least 15% of these patients must stay well to have the popular opinion remain the same as it is and more than 15% of cures must be obtained to have this skeptical attitude toward surgery lessened and earlier treatment made possible.

This pessimism is prevalent among physicians as well as laymen. Those patients who have not seen physicians long before seeking surgical aid are in the minority and physicians must bear no inconsiderable blame for this delay. After all what the patient does about it is always a resultant of his own attitude and action plus his physician's attitude and action.

To reduce the mortality from cancer we as physicians must uniformly insist on early destructive treatment and we as physicians will have the proper enthusiasm for such insistence when we can see our patients cured often enough to remove our doubts and make us enthusiastic in regard to such treatment. Advising a patient to have a radical surgical procedure for cancer is not apt to be forceful enough to influence the patient's action when

given with a mental state of hesitancy, doubt, or even despair, founded on the memory of a long series of such cases who went away, were operated upon, came home and died of cancer.

Through our educational efforts we are now trying to make the people understand that cancer is a local condition and when taken early can be cured by radical measures, yet these same people are thoroughly familiar with nothing but failures to cure by these same methods we are advising. Of course we explain it to them by saying it was too late and they respond by asking why we operated if it was too late; and with the amused suspicion which is so prevalent regarding surgeons, we are excused as needing the money, as hopeless optimists or as being ignorant of the subject.

We must stop saying so often that we operated too late, as it is an admission, quickly taken up, of a rather poor quality of surgical judgment to say the least, and as such does not inspire the confidence we so much desire and which is so necessary to make headway.

Of course we may by our educational efforts teach folks to seek treatment of a surgical kind earlier but surely not when accompanied by too few cures. Such education will only be of material influence when we can show results as good as we talk about.

There should be no legitimate excuse for a cancer of the lip, as large as a dollar and with enlarged glands down to the clavicle, coming to the surgeon and there should be less excuse for the surgeon operating such a case.

For years ovarian tumors have been operated with over 95% of cures until those of us of a recent generation never operate the enormous cysts our text books picture and we never see them. These cases have learned to accept early operation, not because of any educational work as such but because of the good results we all know about.

Just what per cent. of cures we must have to put a stop to the general delay now prevalent no one can say. We probably cure less than 15% of all cancers we operate now and to better our average we must operate earlier and to operate earlier we must cure more. It comes back to the surgeon and advance must be made from within.

If this position is accepted it means that we must change our present habits considerably and try to come to some common agreement in regard to what our methods should be and to more clearly define our limitations, hoping that the harm done by operating unpromising cases will lessen.

With this in mind a survey of treatment with first a few general principles will be suggested:

1. The only agents now available are those of total removal or of total destruction in place.

2. In those cancers which do not often form metastases or do so very late, local measures suffice.

3. In cancers in a location or of such a nature that metastases are usually early, the lymphatic drainage systems should also be removed.

4. Specimens should not be cut out of growths for examination. It is only comparatively rarely that the surgeon cannot make a clinical diagnosis of sufficient accuracy to warrant suitable treatment. In those cases where doubt does exist the growth may be removed as a whole and a section made from the specimen at once and examined. Before proceeding with the operation any part of the field which may have been contaminated should be cleaned or excluded.

5. Partial operations should not be done. Palliative operations should be cut down to a minimum; the excuse of palliation is often just an excuse to appease the patient and friends. Palliative treatment, less than radical surgery, should be encouraged but *never should radical operation be done as palliation in the surgeon's mind and hope of cure in the patient's mind*. It seems that just here is the difficulty; for it is easier to attempt something than to turn aside the patient and his pleadings that he be given a chance. Practically every patient accepting operation does so in the hope of cure when very often his surgeon knows he cannot be cured.

6. All operations should be as bold and as radical as conditions justify. Many breast amputations are called radical when they are neither radical nor complete nor even cancer clean.

7. When the condition is discovered and operation is to be done, the patients should be warned against examining, rubbing, injuring, or otherwise irritating growths of any kind. In preparation for operation such regions should not be scrubbed. Cancers treated by osteopaths or anyone else with local massage should usually be left alone.

8. During operation cancerous organs should not be clamped, opened, compressed nor pulled anywhere near the seat of the disease. Operations requiring such traction and clamping as a part of the technic are unsuitable.

9. Cancers in very fat people or in very young patients are less amenable to surgery and this should be considered. A very eminent surgeon once said that in a certain type of cancer in fat women he had operated many and never cured one. The occasion for this remark was that he was then operating such a case. Why did he do it?

With these principles in mind we can classify for working purposes the various cancers met with and we can lay down definite lines of treatment for each, having due regard for the limitations we should recognize.

1. The first class includes the epitheliomata around the eyes, ears, scalp, cheeks, nose and on the backs of the hands and wrists as well as cancer of the fundus of the uterus and the fundus of the bladder.

These are all slow growing, form metastases very late if at all, and if seen early are readily cured by local measures. Probably cutting operations are less favored around the face than are other agents. The X-Ray, radium emanations, caustic pastes, curetting with the application of chemical caustics and the actual cautery are all useful. The treatments must be thorough and given by those who are expert in the particular method used. If the region is such that the actual cautery can be used it is probably the most readily applied. It should be used repeatedly if necessary and after all growth ceases only should plastics be attempted to heal the wound or remove the scar. The X-ray in competent hands has given excellent results in these cases. If the growth is in the uterus or bladder clean excision will do.

In case the bones of the face are invaded or the glands of the neck are enlarged by metastases, radical operation should not often be done.

2. Group two includes growths of those regions which are easily accessible, have definite removable drainage areas and where metastases are prone to occur. This comprises cancers of the breast, the lower lip, the penis, the cecum, the sigmoid and the rectum.

In this group the operation should be as radical as conditions warrant and the lymphatic area should be removed en masse with the primary growth and the intervening tissue if possible, as it usually is. *When there are enlarged glands in this dependent lymphatic area which are definitely demonstrable clinically, radical operation should not be considered.* This is apt to be questioned for most of us will dislike giving up the beautiful radical dissec-

tions we are in the habit of doing in these cases, even when we know at the time that our work will be futile.

3. In the third group are placed cancers of these regions which present more or less unsurmountable surgical difficulties because the drainage areas is removable in part only or not at all, or the region cannot be operated without the forbidding trauma mentioned above.

We would here place cancers of the uterus below the body, the stomach, the base of the bladder, the prostate, the gall bladder, the kidney, the thyroid, the tonsils and the tongue.

In this group it is only in the very earliest stage that clean work can be done and the removal should be limited to that very early stage.

Cancer of the uterus is here the big problem. The Wertheim operation is done properly by a comparatively few men and it should be limited to them. Most of us should only operate cancer of the uterus when it is seen early and limited and local probably. This logically should be done without pulling, compressing, tearing, or otherwise tending to perpetuate the disease by implanting it in the wound or surrounding tissues. If later we want to do hysterectomy we may do so although it is useless if the growth is gone and likewise useless if it is not. When properly burned there is only a remnant of the uterus left and if the cancer is not killed it is too unpromising to justify radical dissections.

If the growth is of considerable duration, extends through the walls of the uterus or the uterus is fixed, no radical operation should be attempted. Simple palliative treatments alone should be advised.

4. Group four takes in those cancers which are located so as to be amenable only to palliative measures and their discussion can be obviously limited to their enumeration; such are cancers of the esophagus, the liver, the lungs, the brain, etc.

What is said here applies to cancer as it is generally treated. In a comparatively few places the cases are more carefully selected and operation is refused unless the prospects of cure are good. We all repeatedly see cases, which we consider too late for a cure, go away and be operated elsewhere. Personally I do not recall an ambulant case that I have refused operation in that did not go away and be operated and I do not recall one which was cured by so doing.

With our surgery limited as outlined above of course some will die who might have been

saved but many, many more will be saved who would have died. It may do some good to the cause to send home to die *unoperated* 100 breast cancers with axillary secondaries but it won't do it any good to send home *after operation* such cases 95% of whom die of cancer and only 5% of whom are cured. How can we do this and expect the people to send more, assuring them that there is a good chance that we will cure them.

TUBERCULOSIS.

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The subject of tuberculosis is a very exhaustive one, and to-day is commanding a great deal of attention, not only from the medical profession, but from the laity, who have at last awakened to the necessity of organization, to combat this dread disease.

A few years ago, if a diagnosis of pulmonary tuberculosis was made, it was as good as signing the death warrant of the patient, but to-day owing to the advance of Medical Science, we believe pulmonary tuberculosis to be one of the most curable of contagious diseases, provided, that an early diagnosis of the case is made. It therefore behooves us as medical men, to see that we do not err in the matter of diagnosis, as the whole future of the patient hinges on our ability or inability to diagnosis the condition in time, so that proper treatment may be instituted, and the disease arrested.

In the short time at my disposal, I will not attempt to enter into a general discussion of diagnosis, immunity, prognosis and treatment, but will confine myself to the matter of pulmonary tuberculosis.

Years before the Great War through which we have just passed was even anticipated, the Surgeon General conceived the idea of organizing a Medical Reserve Corps, upon which he could rely to assist in the organization of a Medical Corps, in the event of war.

When war was declared, the members of the Reserve Corps were ordered to the various cantonments, and training camps, in order that they might become familiar with the duties of Medical Officers, upon whom depended the efficiency of our Military Organization, for in order to have an efficient fighting Organization, it was necessary that our men be as near to physical perfection as was possible.

When the Medical Examiners of the various Draft Boards began the work of examining

these men it was discovered, that a great many men were rejected on account of pulmonary tuberculosis, and owing to the rather hazy instructions sent out, and lack of standardization in the method of examination, a great many men were sent to the various cantonments, who were later rejected by the Special Board of Examiners appointed by the Surgeon General to re-examine all draft men.

It was soon discovered that a great variance of opinion, in regard to the method of examination, and the extent of the lesions, existed, and to overcome this, and standardize the method of examination, the Surgeon General organized a School of Instruction, for Medical Officers who were to have charge of the tuberculosis work in the Army. This School was under the supervision of Col. Bushnell, who had charge of all the tubercular work in the Army.

After receiving the course, these men were sent out to the various cantonments and hospitals, where all the examinations were conducted according to the system as adopted by the Surgeon General's Office.

This standardization of the method of examination, I consider a move in the right direction, as to-day there is more uniformity in the work of tubercular men throughout the country.

I might say here that we had to depend entirely on history, physical findings, sputum examinations, and the X-Ray, in making our diagnosis, as we were not allowed to use Tuberculin, or any of the other tests for tuberculosis.

The first step then in the examination of a patient, is to take a careful history of the case, and in this, we will be surprised how often in cases which show healed lesions, although the patient will declare that they never had tuberculosis, they will give a history of some time in the past, not feeling quite up to the mark, or as they term it run down.

The next step is to strip the patient to the waist, for it is not at all possible to make a satisfactory examination through any clothing.

On inspection, we will note:

- (a) The general appearance of the patient, whether he looks well or ill.
- (b) Whether well nourished, and developed.
- (c) Shape of the chest, whether long, broad, flat or barrel shaped.
- (d) Depressions, prominence of Scapulae, pulsations and any diminution in breathing.

On palpitation we will note:

- (a) Condition of the Cervical Glands.
- (b) Deviation of the Trachea.

- (c) Increased or diminished vocal fremitus.

On percussion we will note:

- (a) The width of the Isthmi.
- (b) The width of the complemental space, and the excursion of the diaphragm.
- (c) Any change in resonance over the whole area.
- (d) Size and location of the heart.

On Auscultation we will note:

- (a) Any changes in voice or breath sounds.
- (b) Presence or absence of Rales, and this is best determined by expiration and cough.

As to the relative value of percussion and auscultation, while some eminent authorities claim a great deal for percussion, I am of the firm opinion, that the average Clinician will illicit much more information from the auscultatory method. Percussion as practiced by many is of very little value, as they use too much force, and as so much of the lung is set in vibration, they are very apt to miss any small lesions.

In order to get the most out of auscultation, it is necessary that the Clinician is sure that his own hearing is acute, and that he is equipped with a stethoscope that fits his ears, so that all extraneous sounds are shut out. It is also necessary that he be able to differentiate the different breath and voice sounds as transmitted to the ear through the chest wall. The ability to detect the presence of, and classify the type of rale heard, is of great importance in the diagnosis of tuberculosis, and this phase of the examination should be given plenty of time as on the presence or absence of rales will depend your diagnosis as to the activity or inactivity of the disease.

Now we must consider that we are in the vast majority of cases dealing with a chronic tuberculosis, for when a case has so far advanced, so that it can be recognized by physical signs, it is no longer in the incipient stage, and should be classed as chronic.

The diagnosis of pulmonary tuberculosis has not been given the consideration that it should have, and I feel that we in the general practice of medicine, have frequently overlooked cases, merely by lack of method, and by giving insufficient time to the individual case. The general practitioner is usually a very busy man, but we owe it to our patient, to either make a thorough examination, or else not attempt it at all, for no doubt many a patient has been unwisely advised by the busy physician, and has lost his chance for recovery, when a little more time, and a more systematic method of examination would have resulted in the detec-

tion of the minute lesion which later proved his undoing.

Some authorities claim that it is negligence to allow a case to advance to the stage of rales and positive sputum, while on the other hand many physicians are of the opinion that the first focus they find by means of physical signs is the initial lesion, therefore the disease is in the incipient stage, and we find many cases being diagnosed as active, which show evidence of extensive fibrosis, and changes in voice and breath sounds, and no evidence of rales, and frequently these patients will be advised to give up work and take the rest cure which they can ill afford, and which is unnecessary, as they have with their own immunity and the kind assistance of nature, already checked the progress of the disease. We frequently find these patients filling up our institutions to the exclusion of those who really need the treatment, but who find it impossible to gain admission to these institutions.

It is therefore important that we be able to differentiate between the healed inactive lesion and the recent active lesion, and it is a debatable question whether we have physical signs which will enable us to diagnose incipient tuberculosis of the upper lobes, before rales are found present.

Study of radiographs by the most advanced Radiologists leads us to believe that the tuberculous process begins (usually in early childhood) at the Hilus, and spreads through the lung as a peribronchial process, often terminating in the deep lung tissue, but in more unfortunate cases reaching the periphery. When this occurs we usually find the surface lesion in the upper lobes, and this may as you will see be merely an extension of the peribronchial condition and not a primary lesion, as it is frequently considered by some Clinicians, but rather a late development.

Guncher claims that breath changes take place before we get any moist sounds from the softening of the focus, but he also describes these same changes when the case has become chronic, therefore we would assume that the majority of cases met in ordinary practice are chronic.

It is usually considered that dullness at the apex, is a late and not an early sign of a pathological change.

Schneider claims that the first signs are to be expected from auscultation and not percussion, while Osler claims that feeble breath sounds are the most characteristic early signs, but in regard to this I would say that feeble

breath sounds are an indication that the breathing is slightly retarded, and this is usually due to adhesions which are in the majority of cases of pleuritic origin. So we have a wide diversity of opinion in regard to the early signs. However, we may have an old lesion with all its characteristic signs, within which there has been a re-activation, and then we have a mixed lesion, which proves rather puzzling to the Clinician.

Col. Bushnell claims that we will never be able to diagnose apical tuberculosis intelligently until we accept the theory that we may have more than one exacerbation in that region, and that the lesion we detect, though minute and obscure, is not an incipient lesion. His theory is that the process in its advance from the deep lung, spills over, so to speak, and then the immunity of the patient rises, and the tide of the disease recedes, the lesion heals, and then we get all our characteristic changes in percussion and voice sounds and these are again frequently mistaken for an active rather than an inactive lesion.

In regard to the matter of determining the nature of the process, by the presence of rales, we must remember that we have crepitant, sub-crepitant and indeterminate rales. The indeterminate rale being as to location of bronchial origin, the sub-crepitant of the bronchiole, and the crepitant of the alveolus. The indeterminate rale we term the rale of chronic tuberculosis, while the crepitant and sub-crepitant differing only in size, and occurring in showers, are easily determined, and are indicative of some pneumonic process.

After making a diagnosis of pulmonary tuberculosis it is important to determine whether the disease is of the advancing or non-advancing type. In the non-advancing type we will have dullness, changes in breath and voice sounds, which will come to a level where we will find a sharply marked line of demarcation, and immediately below this we will have our normal sounds. In the advancing cases we will not have any well defined line of demarcation, but rather a shading from the dull note to the resonant with rales probably extending below the area of dullness and not corresponding with the voice and breath sounds. We may have indeterminate rales over the area of dullness with sub-crepitant rales extending below, which is an indication of a lack of immunity, and in these cases we may have numerous foci of infection, the tubercles either remaining discreet or coalescing and forming a cavity.

I have not said anything about miliary tuberculosis, but we usually find this type in

patients who apparently have no immunity, and we have an overwhelming of the vital forces. At the outset there are usually no physical signs upon which to rely, and the X-Ray first of all gives us no information, but later in the disease we get the negative showing very prettily the extensive mottling, due to the rapid invasion of the disease.

The tubercles in this type are very numerous and are disseminated throughout the whole lung tissue. Rales are usually found before any changes in voice or breath sounds.

In the diagnosis of cavitation it will behoove us to be very conservative as I have seen a diagnosis of cavitation made from an X-Ray plate which had all the appearance of a true cavity, but which was not substantiated by physical findings, and the clinician was rather embarrassed to find on autopsy that the cavity could not be found. What had been taken for a cavity was an annular shadow and was produced by the pleura. Here is where we require the co-operation of the Clinician and the Radiologist as the X-Ray is of incalculable value in the diagnosis of pulmonary tuberculosis. The dependable signs of cavitation are, on percussion we would expect to find a tympanitic note, or cracked pot resonance, on auscultation cavernous breathing and whispered pectoriloquy; but we must also remember that it makes a difference whether or not the cavity is empty or whether it is full of mucous, as the signs of a full cavity are apt to be misleading. We must also remember that we may have a displaced heart, which would be so situated as to obliterate the lumen of the cavity and there is where it is very important that the clinician percuss out the heart area, before he proceeds with auscultation.

While I have not time in this paper to go farther into the matter of diagnosis I would like to call your attention to a very important point, and that is the rapid pulse, which invariably is associated with an active lesion, and also another characteristic point which is low blood pressure as we frequently find a systolic pressure of 95 to 110, and a diastolic of 60 to 70.

In conclusion I want to emphasize this—familiarize yourself with the normal as well as the abnormal sounds to be heard in the chest, systematize your method of examination and remember that you owe it to your patient to give him sufficient time to make a thorough examination, and in this way we will be able to do more uniform chest work, and the results will not only be beneficial to the patient, but will also be very gratifying to us as clinicians.

DIAGNOSIS AND TREATMENT OF PERIPHERAL NERVE INJURIES.

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The experience of the war has taught us much in the field of peripheral nerve surgery. The great numbers of nerve injuries gave opportunity for study, and experiment, and accurate observation which was unobtainable under peace conditions. These opportunities have not been wasted. As we gradually acquire a perspective on the nerve work of the war and get time to arrange and observe its final results, we realize that much that was theory before the war is now proved fact, and much that was simple tradition and guesswork has been disproven, and discarded. The lessons we have learned must not be wasted, but must be applied to the comparatively rare nerve injuries of industry and civil life. Not one of them should be allowed to escape without proper treatment, either through the common fault of failure in diagnosis or through ignorance of what can be done for them. It is doubtful whether men will have enough cases to enable them to develop the standards of technic which produce the best results at operation, but all of us can learn to recognize them and institute proper preliminary treatment. Untreated, many nerve lesions incapacitate; well treated very few do.

Lesions of peripheral nerve trunks are of several sorts. On the sort of injury depend the symptoms, signs and prognosis.

The commonest type is contusion of greater or less extent. We are all familiar with the sensory disturbances and temporary paresis following a blow over the ulnar nerve at the elbow. These disturbances are due to sudden compression or concussion of the nerve bundles with temporary loss of conductivity. More severe contusion causes hemorrhage within or without the nerve sheath with edema and more prolonged loss of conductivity. External contusion may be so severe as to rupture one or more of the bundles of neuro-fibrillae. On the severity of the contusion depend the severity and duration of the paresis. Simple contusion without rupture or the formation of scar tissue always recovers without operative interference.

The next most common type of injury is contusion plus injury to the surrounding parts. This is very often seen in fractures of the humerus with contusion of the musculo-spiral in its groove or in lacerated wounds of the arm. In both these examples the immediate paresis

is caused by the contusion of the nerve which tends to get well. Recovery is delayed and sometimes prevented in such cases by the pressure of scar tissue in the surrounding structures, callus in the humerus and connective tissue in the soft parts. This external pressure of scar tissue of one or the other sort prevents conductivity of the nerve fibres just as does scar tissue from hemorrhage or tearing within the nerve sheath itself.

The third class of injuries is that in which the nerve trunk is actually severed by cutting or crushing injuries. These never recover without surgical interference, in spite of reports which seem to prove that gaps are sometimes spontaneously bridged.

Diagnosis of the type of injury which has been sustained, unless the nerve is actually seen in the wound, can be made only after the most careful study. It demands a very accurate anatomical knowledge, accurate observation and a knowledge of the use of both the faradic and galvanic currents for testing purposes. On the other hand, the diagnosis of the presence of a nerve lesion demands only a moderate knowledge of anatomy and that we should always be on the lookout for it. The existence of a nerve lesion is most often missed simply because we forget its possibility. In both the diagnosis and treatment of all peripheral nerve lesions it is fundamentally necessary that we should add something to the store of anatomical knowledge which remains to us from that very moderate amount which most of us acquired in the medical school. Many of us who worked overseas were deeply chagrined at our ignorance of this basic subject when we compared ourselves with the average English or French Surgeon. Many of us delved deep in our Grays while abroad in an attempt to repair this deficiency. Anatomy then is absolutely necessary in any contact with nerve lesions. We need it first to tell us what nerve trunks can possibly have been damaged in any wound. We need it second in the search for paralyzed muscles and to give us the connection between these muscles and the injured nerve trunk. We need it to tell us in high partial injuries what nerve roots are involved, and we need it finally to tell us what nerves supply sensation to the various parts of the body. Sensory tests however are of comparatively little importance, because they are difficult to make accurately, are largely dependent on psychology, because the distribution of sensory fibres is not constant, and because the fields which the different nerves supply overlap to varying degrees. They are, however,

valuable in the finer degrees of diagnosis, and in the tracing of beginning recovery. Our chief reliance for the usual diagnosis of nerve injury must be placed on motor tests. That is, we must discover what muscles are paralyzed either in voluntary power or to the faradic current, and then be able to connect this paralysis with the proper nerve or part of a nerve.

It may be well at this point to indicate a few of the most important motor supplies in order to emphasize my point in regard to anatomical knowledge. All the extensors of the hand and wrist are supplied by the musculo-spiral before its division or by its posterior interosseous branch. Its radial branch has no motor supply. All the flexors of the hand and wrist except the flexor carpi-ulnaris are supplied by the median. The flexor carpi-ulnaris and all the intrinsic muscles of the hand except the abductor, opponens and outer head of the flexor brevis pollicis are supplied by the ulnar. In the upper arm the triceps is supplied by the musculo-spiral. In the leg and foot all the dorsi-flexors are supplied by the external popliteal branch of the sciatic thru the anterior tibial, and all the plantar flexors and intrinsics by the internal popliteal thru the posterior interosseous. If these few facts are kept in mind gross lesions of peripheral nerves will be easily recognized.

The type of injury and the prognosis are much more difficult matters. Complete paralysis of a group of muscles following an injury does not necessarily mean that the corresponding nerve is severed. In fact unless the nerve has actually been seen lying cut in the wound or unless the wound is of such a character, as for instance a penetrating knife wound, as to make its cutting practically certain, the probability is that the nerve is not severed. Therefore in most cases we must watch for a time. Simple contusions will recover spontaneously in a few days or weeks. More severe contusions with hemorrhage or scar tissue will often recover in a few months. Complete division will never recover. It is in determining which we have to deal with that electric stimulation becomes of such great value. Muscles supplied by a damaged nerve may immediately lose voluntary power without losing their response to faradic stimulation through the skin. This is always true at first even when the nerve is completely severed. After a few days or weeks this response to faradism disappears whenever the conductivity of the nerve is completely lost either from severance or pressure. Muscles which have lost their innervation for a considerable period of time lose their normal response

to galvanism and undergo the so-called "reaction of degeneration"—that is they respond slowly and sluggishly or not at all even to heavy galvanic currents. Sensory changes too bear a close relation to the degree of nerve damage. As we said above, however, the observation of those changes is difficult. In general it is as follows: In a moderate degree of nerve injury the superficial sense of light touch is lost. In more severe degrees the pain sense is lost. In long-continued complete lesions even the deep pressure or bone sense disappears. It is then from a careful correlation of the voluntary motor changes, the motor electrical reactions, and the sensory changes that we make a final diagnosis of partial or complete lesions of the nerves. I believe such a diagnosis cannot be made short of three months, and it cannot always be made at all. When, however, a diagnosis of a complete lesion is made, it is by no means possible to be sure whether this lesion is a complete cutting of the nerve or merely a sign of pressure from damage within or without the nerve, that is whether it is anatomical or physiological.

The prognosis on any given case can be made only on the same careful study that has been outlined in diagnosis. In general, contusions of all degrees unless complicated by extra-neural pressure will recover if left to themselves. The period of recovery depends on the distance from the seat of injury to the distribution, on the complication of the distribution, and on the degree of injury. Spontaneous recovery may occur in a few hours; it may require two or three years. Even severe degrees of crushing and external pressure have in my own experience, been overcome and the nerves have spontaneously recovered. Spontaneous recovery can be watched and checked by observation of the signs used in diagnosis. Generally they reappear in the reverse order of their disappearance. During recovery the so-called sign of founillement or Tynnel's sign is of some use. This sign depends on the supposition that new nerve fibres are poorly covered, and are therefore sensitive. If the course of a nerve is gently tapped below the seat of injury a stinging sensation is felt in its distribution as long as the tapping does not go beyond the limits of growth of the new fibres.

The treatment, other than surgical, of nerve lesions is of great importance. It is of two sorts. First that which favors nerve growth. This consists entirely of local treatment in the neighborhood of the wound to improve circulation in the scar to soften scar tissue, and to

prevent its formation. In soft part lesions heat and gentle massage are of most importance. In bone lesions, careful and prolonged fixation tend to keep down the size of the callus. Electricity or other stimulating agents applied over the seat of the lesion probably have no effect on the growing fibres. Second, that which has as its object the maintenance of tone and nutrition in the paralyzed part. Massage and passive motion do this to some extent. Active motion of the unparalyzed surrounding muscles is most helpful. Faradic stimulation in moderate and carefully regulated doses for muscles which will respond to this form of electricity is useful in preventing degenerative changes. Where there is no response to faradism, galvanism should be used, but most carefully to avoid muscle exhaustion. Proper splinting is essential. This does not mean rigid constant splinting, such as the stiff metal "cockup" splint which holds the fingers and wrist extended in musculo-spiral paralysis, but some form of elastic or flexible splint, which allows the opponents of the paralyzed muscles to work, but does not allow the paralyzed ones to be over-stretched. It is undoubtedly true that rigid splinting does delay recovery by causing fixed deformities in corrected positions, and by interfering with nutrition. Flexible splinting, however, prevents fixed deformity and allows active motion of the paralyzed muscles as soon as they begin to recover. Flexible splints in conjunction with daily use through some form of work in the hand and arm, and with walking in the foot and leg gives the most favorable conditions for reinnervation, as the nerve recovers. I am sure, however, that even rigid splinting in corrected position gives better opportunity for ultimate recovery than does use in the position of deformity. I have seen many cases of external popliteal paralysis in which tests proved that the nerve had recovered, and yet there was no voluntary power in the dorsi-flexors of the foot because the patient had been allowed to acquire a rigid foot drop, and thus to overstretch and exhaust the dorsal muscles.

If at the end of two or three months a diagnosis of complete or nearly complete paralysis has been confirmed by repeated examinations, and there are no signs of beginning recovery, my conviction is that exploratory operation should be undertaken. Earlier than this, nerve operation is unwise unless suture of a cut nerve is done at the time of injury or unless it is absolutely certain that the nerve is cut. The reasons for this delay are the danger of lighting up old sepsis, the danger of unnecessary scar tissue formation, and the danger of fur-

ther traumatism to a nerve which might otherwise recover spontaneously.

Before operating on any nerve case, the surgeon should be provided with an apparatus capable of producing a mild faradic current, one pole of which is attached to a fine electrode which can be sterilized. This is absolutely necessary if proper work is to be done, for the reason that sometimes nerves which on external examination have shown no sign of continuity, will, when directly stimulated at operation, show some conductivity, and thereby prove that they are not anatomically severed. To do an end to end suture of such a nerve merely delays recovery. It is extraordinary to see at operation how badly a nerve can be scarred and crushed and yet conduct impulses. This apparatus also makes it possible to save uninjured tracts and to suture only the destroyed ones.

Exploratory operation may be very simple or very difficult, depending entirely on the amount of scar in the surrounding tissues. It is always important to make incisions that are plenty long enough. One must not be handicapped for lack of space. The nerve should always be approached at some distance above and below the injured portion. This gives the advantage of coming down on normal nerve which can easily be isolated. When it is found above and below, the surgeon can work toward the injury without fear of further damage. Observance of this rule does more to simplify nerve surgery than any one other thing. There need be no fear of isolating considerable stretches of normal nerve as the work of Huber and others and general experiences prove that it does no harm. The nerve once found should be handled with the greatest care. My own experience is that less traumatism is done nerves by gentle handling with fine toothed forceps than with smooth ones. Tooth forceps make it possible to seize only the sheath without pinching the nerve itself.

When the injured portion is finally isolated the next step depends on the condition found. If there is evidently a complete separation of all the fibres, two nerve bulbs will appear, the proximal large and rounded consisting of interlaced growing fibrillae and scar tissue; the lower small and wholly made up of scar tissue. In this condition an end to end suture must of course be done. The bulbs must first both be cut back to normal nerve fibres, although it is probably necessary to go back of all the scar surrounding the bulb. This cutting back is best done with a very sharp scalpel in successive thin sections, the nerve being fixed with

mosquito forceps meanwhile. When good nerve is finally reached there remains a more or less considerable gap to be bridged in order to get end to end approximation which must be done without tension. This can be done in various ways. First by freezing the nerve from its bed for a long distance above and below, length can be gained. Second, by manipulation of the adjacent joints in flexion or extension relative length is obtained. Third, by transplantation as in the case of the ulna from the back to the front of the condyle. If all these methods combined do not succeed, then a graft must be done. There is still much discussion of the best method of grafting, but probably the so-called "cable" autogenous graft of Elsberg is the best. In suturing the nerve, I prefer to use fine black vaseline silk with very fine round curved needles. The important point in suturing is, I am sure, the placing of the stitches in the sheath only. Transfixion stitches of any sort should be avoided. The accurate approximation of each bundle of fibres to its proper mate is ideal, but in the present state of our knowledge and technic is impossible. Care must be exercised, however, to prevent rotation and to make a neat, absolutely end to end joint. In the smaller nerves four sutures will usually do this. In the larger more are needed.

After the suture is complete, various methods to protect it, such as fat and fascia transplants, various sorts of tubes, Cargile membrane have been tried. It is probable that all these defeat their own purpose by increasing scar tissue. A groove in healthy muscle in which the bleeding has completely stopped is the best bed for a sutured nerve.

If on exploration the nerve is found to be crushed but not completely separated, then direct electrical stimulation may reveal some conductivity. If so the nerve must be left to itself. If it is continuous but badly crushed and does not transmit stimuli, then only experience can tell whether it should be freed and cleared of scar tissue (eurolisis) or whether it should be resected and sutured.

Sometimes complete loss of function is dependent simply on firm fibrous bands. The freeing of these gives the best results of all nerve operations.

In badly scarred cases or in those where there has been much sepsis, all nerve sutures should be done in two sittings, the first a simple exploration to expose the whole field of operation. This wound is closed, and recrudescence of sepsis watched for. If it does recur there need be no hesitation about opening the wound

for drainage, whereas if the suture has been done at the first sitting, and sepsis appears one hesitates to drain freely and the suture is usually lost. If no sepsis appears, at the end of ten days the wound is re-opened and the suture done.

Under proper treatment many injured nerves recover without operation.

Care, skill and knowledge are necessary in making a diagnosis and advising treatment.

Nerve suture is followed by recovery in at least 60% of the cases regardless of the time element.

Nerve recovery is a very slow process.

Nerve suture or exploration should always be attempted.

Operations such as tendon transplantation are sometimes successful in compensating part of the disability of nerve lesions, but they should never be done until sufficient time has elapsed to insure that nerve recovery is impossible.

A FEW POINTS OF INTEREST IN A CASE OF AORTIC ANEURISM. CASE REPORT.

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Case No. A-643, an American, male, country hotel keeper, aged 45, entered with a complaint of a "slight pain in the chest, with occasional shortness of breath."

Family History: Negative as to similar conditions, carcinoma or tuberculosis. He had been married over twenty-five years. His wife had had no pregnancies.

His former health had been good, with no history of operations or injuries.

Previous Diseases: The patient had diphtheria thirty-four years ago. Twenty-seven years ago he had an attack of gonorrhea. He gave a history of having had a small "soft chancre" on the penis twenty-five years ago. This lesion lasted but four days. No treatments were taken at the time.

Habits: Coffee 1 cup, tea 2 cups, cigars 3 to 4 daily.

Present Illness: While loading hay in a field one day this past summer, he had to stop work because of a pain in the chest. It lasted but a short time. The pain had been present more or less since then, however. It gave him more trouble in damp weather.

There was nothing remarkable in his urinary history except his having to urinate once at night. There was no delay in starting the stream, and no dribbling.

Recently he had had periods of jaundice that made their appearance about four times a year. These always followed the use of whiskey, which he said he never used excessively.

PHYSICAL EXAMINATION.

General Appearance: The patient looked well and robust. His height was five feet ten inches; weight one hundred ninety-six pounds.

Scalp: Negative.

The eyes showed nothing abnormal. The pupils reacted well to light and accommodation.

Teeth: A very severe degree of pyorrhea existed, together with a loose bridge which harbored a very disagreeable odor.

His tonsils were moderately enlarged; the throat showed a moderate degree of pharyngitis.

The submaxillary glands presented a marked degree of firmness. On either side they were about one inch in length and movable.

Heart: A diastolic murmur was heard over the second interspace at the right sternal border. It was also audible three inches left of the mid-sternal line over the fourth interspace. A blowing systolic murmur could be heard along the left side of the neck.

Pulse: The pulse at the right wrist was of the pistol shot type. The right pulse was also greater in volume than the left. It was felt sooner in the right radial than in the left with each cardiac impulse. There was visible pulsation in the finger nails which could be noticed more easily on the right. The pulse rate was 80.

The blood pressure was as follows:

	Systolic	Diastolic
Right side	142	110
Left side	108	70

The lungs presented normal physical signs.

Abdomen: There were signs of a mild degree of ascites. A small succussion wave could be elicited. There was present slight capillary engorgement at the umbilicus.

Extremities: Varicose veins were well marked in both legs as follows:

On the left: Enlarged upper segment of internal sphenous vein; the internal sphenous at the knee; the inner and posterior surfaces of the calf of the leg.

On the right: Enlarged upper segment of the internal sphenous; anterior, posterior and inner surfaces of the calf.

Rectal examination elicited a moderately enlarged, hard prostate. There was also a scar of a previous fistula in ano.

The skin showed no pathology, except for two small papillomata, one on the back, the other on the left aspect of the abdomen.

The patellar reflexes were both normal. Romberg's sign was negative.

Resumé on the day of examination was set down as follows: Aortic and mitral insufficiency; aneurism or dilated aortic arch probably due to syphilis; foci in teeth.

LABORATORY REPORTS.

Dental x-ray showed abscesses at the roots of the following teeth: lower left first molar, lower right and left lateral incisors and the lower left cuspid.

X-ray of the chest showed the following:

The diaphragm was two inches too high on the right. The heart was enlarged one and a half inches to the left. There was a moderate

sized aneurism of the transverse arch of the aorta which apparently extended downward into the beginning portion of the descending aorta. The plate also suggested passive congestion of the mediastinum.

The urine showed nothing remarkable. The blood showed nothing interesting except a leucocyte count of 6350. The hemoglobin was 95%.

The Wassermann test gave the following report:

Acetone Insoluble Antigen Negative.

Cholesterinized Antigen Positive++++

Treatment: The infected teeth were extracted with the exception of the upper anteriors which were considered amenable to treatment. Thus far three injections of salvarsan have been given.

Results: The patient's previous complaint of pain in the chest and occasional shortness of breath is constantly diminishing. He states that he feels much better.

DISCUSSION.

The purpose in presenting this case is threefold. First, because it exhibits such a marked contrast between the mildness of the symptoms and the abundance of pathological findings. Secondly, because it illustrates the value of a careful general examination. Thirdly, because it shows the advantage of always bearing in mind the possibility of syphilis.

We have here a man whose only symptom was "slight pain in the chest with an occasional shortness of breath." His general appearance, in fact, would not indicate that any serious condition existed. Yet, after a complete examination we found definite signs of pathology.

This should at once illustrate the value of a careful general examination. And what do we mean by a careful general examination? We mean simply this, that if in the regular general examination any one particular condition is suggested we should carry it out further, in detail, as it were. For example, in all routine examinations, the pulse should be observed at both wrists. In this case it was observed that the two pulses differed in volume, and that on one side it appeared before it did on the other. It at once should suggest the recording of blood pressure in both arms, and, as might be expected there was a decided difference in the pressure in both arms. This is an important sign which points toward aneurism. It was first observed by O. K. Williamson (1). He states that if the blood-pressure of the two arms vary more than 20 mm. Hg, it favors aneurism.

Personally, I believe the blood-pressure should be taken bilaterally in all cases presenting cardio-vascular symptoms. I have not mentioned "tracheal tugging" which was pres-

ent in this case, because, as shown by Toulmin (2), it may be present in health and in other diseases; hence, it is of little value.

Furthermore, it shows the advantage of always bearing in mind the possibility of syphilis. As I have mentioned before in a previous article (3), "that in any case with a history of a venereal lesion, syphilis is to be ruled out with caution before a diagnosis is made."

The venereal history in this particular case was valuable. Twenty-seven years ago he had gonorrhea, which in itself does not mean much, but very often this is the only disease of which we can obtain a history in cases which later turn out to be syphilis. I am beginning to believe that chancres occur within the urethra, associated with gonorrhea, more often than we have previously realized.

The most important fact in this venereal history was the occurrence of a sore twenty-five years ago, which the patient called a "soft chancre." It lasted but four days. We must remember that twenty-five years ago the differentiation between chancres and chaneroids was merely a matter of guess-work. Neither the knowledge of the spirocheta pallida nor the aid of the Wassermann test was known. Therefore this sort of history should at once arouse the suspicion of the possibility of syphilis.

CONCLUSION.

This case brings out a few things to bear in mind. First, we should not depend too much upon a venereal history. If it is negative, or nearly negative, the value should be compared with that of a negative Wassermann—it really doesn't mean much. Patients will nearly always under-rate the severity of their previous lesion, but if they will admit the history of any kind of a venereal sore, syphilis must at once be very carefully considered.

Secondly, after we have diagnosed the condition, a part of the treatment should consist in removing any possible foci of infection particularly as a prophylactic measure against mercurial nephritis.

The third point of interest here is the importance of observing the blood-pressure bilaterally. This case illustrates how important a procedure it is in cases presenting cardiovascular symptoms.

The last point to consider covers the treatment and prognosis. The condition here is of long-standing origin, but the active lesions are not so far advanced that they should be considered beyond treatment. If we can arrest the progress of the condition as it now exists,

together with relieving his symptoms, we have done a lot in the way of benefit for the all-important individual, the patient.

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CONGENITAL HARELIP AND CLEFT PALATE.*

CLAIRE L. STRAITH, S.B., M.D., D.D.S.

DETROIT, MICH.

Congenital harelip and cleft palate is unquestionably one of the most hideous deformities known to the human race. Early in the second century, Galen knew it to occur among his people, and described it as "lagocheilos," meaning, "lip like a hare."

These afflicted children are a source of great mental anguish and humiliation to the parents, and as the child begins to appreciate his deformity, his embarrassment is often so great that his mental development is retarded.



FIG. 1. Child referred to in text as first child born of second marriage—father having double hare lip.

He shuns society and is often held back in his school work because of his difficulty in making himself understood. Therefore it is essential

*Read before the Calhoun County Medical Society, Thursday evening, November 4, 1919.

that these children be operated on at an early age, not only to save the child's life, for many of them die of malnutrition within the first few months—but also to save the parents from humiliation and enable the child to develop normally.

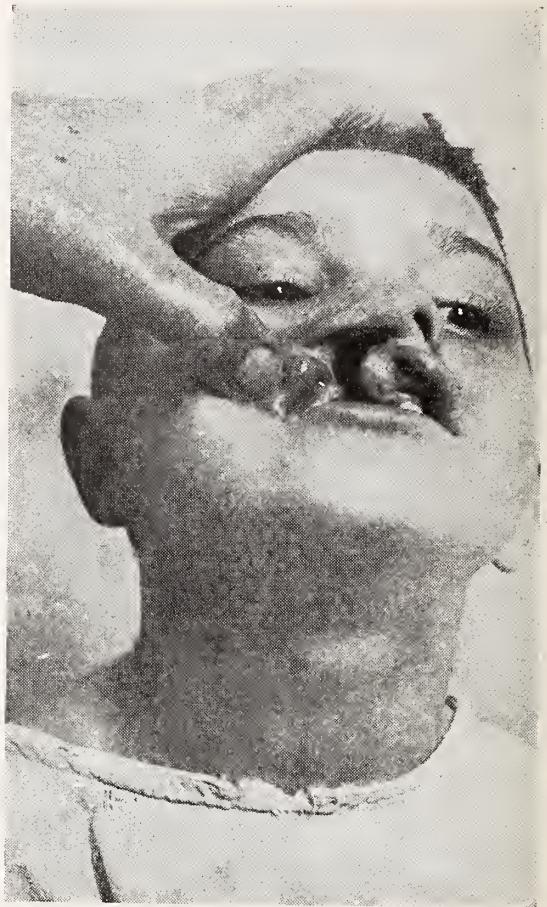


Fig. II. Note nose diverted from mid-line. Abnormally large nostril on affected side. Complete hare-lip and C. P. Children should never be allowed to go until this age uncorrected.

EMBRYOLOGY.

The normal lip and palate are formed by the union of certain processes during the first few weeks of embryonic life. You will remember that at about the fourteenth day the mouth is represented by a depression between the head and pericardium. This primitive oral cavity has no lateral boundaries, but these appear later and the space so formed eventually becomes the upper part of the mouth and nasal cavities, the floor of the mouth and tongue being developed from the pharyngeal portion of the foregut.

At about the third week the mandibular arches are formed on either side. These grow forward and eventually unite in the midline, forming the lateral and lower boundary of the

oral cavity. At the third week, the maxillary process buds out from the mandibular arch, and from above another process, the naso-frontal, grows downward. On each side of this process



FIG. III. Same boy. Picture taken day stitches were removed from lip.

there is a slight depression—the olfactory pit, which later becomes the nostril.

About the sixth week the parts forming the lip unite. The lateral nasal process unites with the maxillary process, and the naso-frontal process becomes fused at each side with the maxillary process so, by the eighth week, the lip should be completely formed.

The palate is next formed by the union of lateral processes uniting first at the front with the pre-maxillary process, then fusing in the mid-line, till there is a union to the tip of the uvula. This, then, divides the primitive oral cavity into two parts, the oral and the nasal cavities, and the process should be completed by the tenth week.

From this brief description of the embryology, it will be seen that all children have a cleft palate up to the eighth week of intra-

uterine life, and the child, born with a cleft palate, simply represents the result of a failure of union of the parts which compose the palate and lips. As Brophy states—"At birth, a cleft palate, with rare exceptions, has in it sufficient tissue to form a normal palate; the abnormality is only a separation of well developed parts."

It is particularly interesting to theorize at least as to the possible causes of this deformity, for any factor which interferes with the closure of the cleft may be the cause of a cleft palate.

ETIOLOGY.

The Etiology of Cleft Palate is, as yet, very obscure. Many theories have been suggested as to the predisposing and active causes but, as yet, no one factor has been found responsible in all cases. Uterine inflammations, venereal diseases, maternal impressions, defective nutri-



FIG IV. Operated in infancy leaving notched lip, as shown.

tion during the early weeks of pregnancy, supernumerary teeth, toxic influences, such as alcohol, lues, etc., have all been considered responsible by certain authors, but, at present,

the hereditary factor is believed to play a more important role than any of the others given.

In 1899, Prof. Warnekros, first published an article in which he noted the frequent occurrence of supernumerary teeth in cleft palates. Since then he has done considerable work



FIG. V. After notch was removed.

on this subject, and now claims that all cleft palates are caused by a supernumerary tooth bud. It is a fact that, in many families, where there is a cleft palate trait there is often a history of irregularities in the tooth formation in the lateral incisor region. However, it is difficult to believe that this cause is always present because we so frequently see harelips which are not associated with cleft palates, and the two conditions are, in all probability, caused by the same thing.

Dr. A. O. Strauss, of the Berlin Zoological Gardens, reported in 1913, that thirty jaguars, born of one mother, by the same sire, within one year, had cleft palates, and all died. The parent animals had been fed cold meat, from which the blood had all been extracted. Later, the diet was changed and they were fed meat which was still warm and contained blood; upon that diet, not one cleft palate occurred in

two litters, in one year, about twenty-one jaguars. (Brophy's Surgery.)

For several years, Mr. Wm. F. Blades carried on a research work in connection with the Eugenics Record office, attempting to determine the influence of heredity in the transmission of cleft palate and harelip. In these experiments, he used affected families of Boston bulldogs, a breed of dogs in which harelip and cleft palate occurs quite frequently. He found in this work on dogs that the trait was transmitted to the offspring, with great regularity. He also attempted to determine whether the diet of the parents would have any effect upon the offspring, but found that the dogs, with the hereditary trait, gave birth to cleft palate puppies, no matter what food was given to them, and the controls gave birth to normal puppies upon the same diet.

Mr. Blades also treated normal dogs with alcohol and found that they gave birth to normal puppies, except where there was a cleft palate trait. It would seem from these observations that, the factor of nutritions and toxins, such as alcohol, seems to play little or no part.

In this connection, Mr. Blades raises the following question: "At the same time, when the lip and palate are developing, are there not other parts of the embryo developing, and, if nutritional disturbances arrest the development of the lip and palate, would we not expect to find other evidences of arrested development, resulting in some other deformity, which should almost invariably accompany harelip and cleft palate?" In their records covering thousands of cases, they find no constant association between this and any other deformity.

The work of the Eugenics Record office is not yet completed, so they are unable to draw any definite conclusions; but Dr. Davenport, the director of the Institute informs me that, from their observation, heredity seems to be the most important factor.

The influence of heredity is well illustrated when we consider the occurrence of cleft palate, on a small sparsely populated island, off the coast of Maine. One of Eugenics Record office workers has spent eighteen months looking up family histories on this island, and a record through seven generations of some families shows a remarkable percentage of cleft palate and harelip cases. There are only a few family names represented on this island, and, practically, all marriages are between cousins, and, due to heredity and this inter-marrying, hare-

lip and cleft palate, in some form, is represented in nearly every family.

I wish to cite a case in my own experience.

A normal woman was married at fourteen years, to a normal man; there being no history of cleft palate nor harelip in either family, so far as is known. There were five children by this marriage, all physically perfect. She was married a second time to a man having a double harelip and who also had a brother with a single harelip and cleft palate. The first child, by this second marriage, was born with a double cleft palate and harelip. This seems to show that heredity is the most important factor.

FREQUENCY OF CLEFT PALATE.

Accurate birth statistics, in regard to the frequency of cleft palate births, are very hard to obtain. It is certain they are of more frequent occurrence than is generally thought. The latest statistics available are those compiled by the Surgeon General's office, showing the number of men examined by local boards for the draft. These statistics are based on the first two and one half million men examined.

The total number of harelips recorded is 283. This probably includes some unoperative cases, and some with unsightly scars, with no record made of the usual harelip scars.

The number of cleft palates recorded is 1183, or about one in thirteen hundred. The city rate for cleft palate is about 0.36 per thousand, and the rural rate is 0.47 per thousand. The city rate for harelip is 0.06 per thousand and the rural rate 0.13 per thousand, so the rural rate appears to be about 50 per cent. greater than the city rate.

For both harelip and cleft palate, the ratio slightly exceeds one in 2000. We must remember that these are only men over 21 years of age, so the number born with cleft palate must be considerably larger, for the mortality of cleft palate babies, if left unoperated, is about 30 to 40 per cent.

According to states, the number of cleft palates and harelips varies, the greatest percentage being found in Vermont and Maine, where there is about one in seven hundred fifty; while in Michigan, the proportion is about one to 2,000.

TREATMENT.

The correct treatment for complete Cleft Palate and Harelip has been a subject of much controversy for years. Children are usually poor operative risks, in any event, and many

eases have been lost through excessive eagerness or impatience, on the part of the operator. These children should not be operated until they are physically fit for an operation. They should all be examined by a pediatrician and operation postponed until he reports that they



FIG. VII. Same after operation.

are gaining in weight, have normal stools, and a clear chest. If this rule is followed invariably, the post operative mortality will be considerably lessened.

The best age at which to operate has been a subject in dispute for years but, at present, most men agree that, in case of complete harelip and cleft palate the first operation should always be bone surgery and the operation should always be done as early as conditions will permit, from the first 24 hours to three months of age at the latest. The surgeon should treat this condition exactly as he would an ununited fracture. The ends of the bone should be freshened and the interposing tissue removed, then the two freshened ends of the bone wired together, so that a firm bony union results. In the case of double clefts, with a protruding pre-maxillary bone, this pre-maxillary bone should never be cut off, for such a mistake leaves an almost irreparable deformity. This bone should

be placed in its normal position, the approximating edges freshened so that bony surfaces are in contact and wires introduced which will hold the part in position till a firm bony union is established.

The lip operation should be done second. When there is only slight cleft of the alveolus, and only one wire needed, some men do both the lip and the alveolus at one time, but usually, in the case of wide clefts, it is better to do the bone operation first, and the lip about five or six weeks later.

The third operation, that of closing the soft palate, should be done just before the child begins to speak; usually about the fourteenth or sixteenth month, so that the child can be taught, from the beginning to speak correctly.

The Post Operative care is usually greatly neglected. It would be fruitless to simply close over a cleft palate and expect a marvelous change in the speech. It takes months of careful work with a vocal teacher to obtain correct co-ordination of the organs of speech, if the patient has already learned to speak with a cleft palate accent, but wonderful results are

obtained by careful, conscientious work. Only last winter I saw a man, 33 years of age, a major in the army, who had been operated at 26 years of age. Up to this time, his speech had been almost unintelligible, but, after nine months of careful work with an elocution teacher, his speech was perfect, and remained so.

It is impossible to outline all the steps in these operations in detail, for one can not get the small points in technic without continually observing and assisting in these operations; but I shall try to give you the technic in general for the repair of these defects, and point out some of the many mistakes that have been made in the past which should be avoided in the light of present day surgery.

In conclusion I wish to publically pay my tribute to my friend and teacher, Dr. Truman W. Brophy, for his many kindnesses extended to me. I think he has done more to establish a logical method of treatment in these cases than any other man.

(Lantern slide demonstration of operative procedures.)

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ANNUAL MEETING

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OF THE

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March, 1920.

Editorials

MOLECULE VS. ATOM OR THE TOXINE OF ISOLATION.

This is an age of union-union, translated into terms of greater purpose, efficiency and strength. The end results of union has not in view solely a policy of aggressiveness, but in large measure the policy of conservation and defense. Today union surrounds and permeates every activity of human endeavor, and is especially emphasized, developed and organized at this our most important and critical period of political and economic existence—a period almost exclusively occupied in propaganda of reconstructive ideals and measures. It is a battle for existence equally as well as for a drive for a "place in the sun," wherein group activity will succeed and single endeavor count as naught. It is a fight of the molecule versus the atom, of group activity versus single existence. Whether these molecules of human activity are represented in combinations of finance, labor, business, agriculture or the professions, the union or combining force of one or the other of these factors of endeavor will hold its own particular status in this reconstructive world

in an exact ratio of its effective union and molecular activity.

The Wayne County Medical Society having an appreciation of the conditions confronting the profession of medicine today, and in the near future; and also having in view the absolute requirement of an unionized profession (not for "strikes," but for defense, preservation and efficiency) to meet such present and changing conditions, has arranged for a membership drive, with the object of securing one hundred percentage of eligible membership in the county. For the purposes of the drive the county and city have been divided into several districts, and these districts will be thoroughly canvassed by the membership committee, of which Dr. Howard Pearce is the Chairman.

The Wayne County Society offers the following ideal membership advantages: An upto-date clubhouse home, conveniently situated in the heart of the business section of Detroit; a present membership, including a very large per cent. of the leading practitioners of the city and county; a large, modern and nearly perfect auditorium for general and sectional meetings and for entertainments; a well stocked and selected reference library, including the leading medical journals published in this country; an efficient and upto-date clinical laboratory in charge of experts; weekly meetings for the presentation of original papers, exhibition of cases, etc., including frequent addresses by nationally known members of the profession, covering the several medical specialties; a well managed and successful medical defense organization; and last, but not least, a moderate priced and much patronized cafe service.

The social side of club life is a prominent feature of the county society's activity, promoting as it does acquaintance, goodfellowship and a spirit of professional tolerance and good will among members, which markedly shows itself in the daily routine of professional visits and consultations.

Scripture says, "It is not good for man to dwell alone," and it should have added, neither is it proper for a physician to deny himself to the brethren, for behold, in time he perishes in the toxin of his isolation, and no patient knoweth him," (except as a "back number," qualified for the "discard.")

Membership in a county society qualifies a physician for membership in the State and National Associations. These three units of an ideal unionized profession should be so strengthened this year that they may successfully meet conditions sure to arise in the very

near future, and which will, if not strenuously opposed, constitute a menace to the profession as a whole, and personally to the physician himself, affecting his status as a professional man, and as a citizen of repute and influence in the community.

It, therefore, seems an absolute necessity in this period of change and reconstruction for every reputable registered physician in the State, if a member of his county society, to constitute himself or herself a committee of one, and impress upon those practitioners eligible for membership, the immediate urgency of a 100 per cent organized profession, and the personal benefit derived from membership with the County Unit. Let every physician in the State translate his present nascent atomic professional status into a condition of molecular activity, the watchword being, Altogether—Now.

Contributed.

COMPULSORY HEALTH INSURANCE.

Compulsory Health Insurance was born in Germany. Its father was Otto, Prince von Bismarck, and its mother was Political Necessity. The Iron Chancellor knew his Germany. He had no fear of the upper classes. Selfish interests would keep them in line. He had no fear of the middle classes. A long drawn out title and paternalistic interest in their business, would satisfy them. But when he came to the submerged class, that was the problem to make even Otto, Prince von Bismarck walk the floor. Here was a class who had to eke out existence on beggarly wages. Their hours of toil were long and with the utmost frugality, they could scarcely keep two jumps ahead of hunger. The question with Bismarck was how to knit this class to the State; how to get the warp and woof of their daily lives so interwoven in the fabric of the Government that the downfall of the State meant utter ruin to them; how to give as little as possible and yet keep the working people contented and satisfied.

No one knew better than Otto, Prince von Bismarck that to talk of the glories of the Fatherland to a man who has never known the joy and satisfaction of a full stomach is not conducive to great results. But, if he could show that man that, if he would unquestioningly obey those above him; if he would toil for long hours and short pay; if he could be made to save something out of his pittance, a loving government would see that he had medical attention, if the man were sick; if unemployed, he would be paid a part of his daily

wage; that his children, particularly boys, potential soldiers, would be looked after; that if the man died, he would be given decent burial, then the Iron Chancellor felt that the problem would be solved. But all of this would mean money and the State had no money to spare. So Otto, Prince von Bismarck discovered that the only way to do was to establish a system of Compulsory Health Insurance. The workman should pay a portion of the premium out of his meagre wage and his employer should pay a portion and the great paternal State would administer the funds. No one suggested that, if the worker was paid decent wages, he could do all of this for himself. Decent wages did not fit in with the great Deutschland uber alles scheme. Cheap labor and long hours meant that Germany could undersell her competitors in other countries, where the standard of living was higher. Nothing was said of the great subsidies paid to employers that they might by cheapening goods control the markets of the world. Nothing was said that labor eventually paid the subsidies in the form of taxes.

When the never-to-well paid physician rose to remark "I am absolutely essential to the working out of his plan, where do I come in." He was told that he was not considered. The individual must suffer that the mass might be benefited. He was given the choice of abandoning his profession, or going in and by making it quantity instead of quality in the medical service rendered, eke out a living for himself and his family. Here was class legislation with a vengeance.

In 1911, William Harbutt Dawson, an English writer, published a book called "Social Insurance in Germany." He very frankly states that he is enchanted with the system and its results. Here are some of the results as set down on Page 79, Chapter 8.

"The most serious controversy to which the working of the Sickness Insurance Law has given rise is the controversy between the funds and the doctors and it is not likely that the recent revision of the law will end this long continued feud. Two questions have been uppermost—the question of the method and measure of payment and that of "free choice" of doctors. The Government has consistently refused to side with the medical profession in its demand that the principle of free choice of doctor should apply in every case. In a bill, the Government endeavored to make a *modus vivendi* which should put an end to the constant disputes between the sickness funds and the doctors. The explanatory memorandum dealt

with this question in considerable detail; it stated

"It is lamentable that for many years keen discussions have occurred between the doctors and the sickness insurance authorities, *resulting in many places in bitter disputes and a state of open conflict. Disputes of this kind, however, are often prejudicial to the proper medical care of the sick and lead to serious public injury.* The abuses have reached such proportions that legal measures were emphatically called for in the most various quarters as the only practicable course and in fact it is no longer possible to evade the duty of seeking a remedy.

That the introduction of statutory sickness insurance has in general injured the interests of the medical profession cannot be acknowledged. It is certain that the doctors as a whole are indebted to this institution for many benefits, and particularly for an *enormously increased demand for medical assistance and for greater security of payment.*"

If owing to a large and to some extent *excessive* influx into the medical profession which has been observable since the introduction of the Sickness Insurance law, the individual doctors have not been benefited proportionately, that is not the fault of the Insurance laws."

No one will be tempted to question the German Government's statement that there was an "enormously increased demand for medical assistance but one can reasonably question whether the touted "security" offset the small returns. Here we have the concrete example of Germany's love for the "Mass" in contradistinction to the "individual." It was Mass insurance, mass formation, because masses can be made perfectly obedient, while the individual is always an unknown quantity. Yet the mass is made up of individuals and common sense tells us that by weakening the individual you weaken the mass accordingly. The great German Mass idea has had its day in court and the Great War tried it and found it wanting.

But the medical profession of this country need not be concerned to-day about what Compulsory Health Insurance meant to the poorly paid, overworked, verbotenized pre-war German workman. *The question that is of vital importance to the American is, who is trying to fasten this same system on the necks of the American people and on the necks of the medical profession?* For five years more or less, an organization calling itself "The American Association of Labor Legislation with headquarters in New York City have been working to

give "Compulsory Health Insurance" a foothold in this country. Their claim is that it is for the benefit of the laborer and that he wants it. Yet Samuel Gompers, head of the American Federation of Labor will have none of it and I venture to say that not one person in a hundred thousand outside of the medical profession know what it is all about.

In taking up the work of the Committee on Civic and Industrial Relations of the Michigan State Medical Society, the Chairman frankly admitted that he knew nothing of the subject but that he would bring to its study an absolutely unbiased mind. He wrote to the Surgeon General for information on the question of Compulsory Health Insurance. The reply he received was from Mr. John B. Andrews, Secretary of the American Association for Labor Legislation. Under date of Nov. 20, 1919, Mr. Andrews wrote:

"Your request for information concerning health insurance has reached me after having been endorsed over from the Surgeon General of the War Department to the Surgeon General of the Public Health Service and thus on to me. Under separate cover, I am sending you a copy of the health insurance bill as it passed the senate of New York last April. It failed to pass the House due to the autocratic action of the speaker who held the bill in Committee. The principles embodied in this bill have been generally followed in the bill as it has been introduced in the legislature of other states.

Under separate cover, *I am sending you a copy of the recent report of the Social Insurance Committee of the American Medical Association and also that made by the United States Public Health Service.*"

On the letter head of this American Association for Labor Legislation, I found the names of Alexander Lambert and I. M. Rubinow. The one is the President of the American Medical Association; the other was appointed by Dr. Lambert as Executive Secretary of the A. M. A. Committee appointed to examine into and report on the question of Compulsory Health Insurance. The fact that Dr. Rubinow had been an avowed champion of Compulsory Health Insurance did not seem to make his appointment a questionable one in the eyes of Dr. Lambert.

Seeking further information, the Chairman wrote Dr. Frederick R. Green, Secretary of the Council on Health and Public Instruction American Medical Association. Under date of Nov. 10, 1919, Dr. Green wrote:

"In case a social insurance bill is introduced

in your Legislature, "*I wouldn't attempt to fight it openly, but I would have a bill or resolution introduced providing for a commission to study the subject and report next year. I would also endeavor to prevent your State Society from taking any positive action on the subject one way or the other.* The principal interest of physicians is that they are expected to furnish the medical service necessary in operating the law. Many physicians without understanding the question take a violently antagonistic attitude and are unreasonable in their opposition. This not only does no good but it prejudices the public against the arguments of the medical profession."

On Nov. 17, 1919, in answer to a letter, Dr. Green wrote:

"The discussions of the question (Compulsory Health Insurance) in this country have been almost entirely ex-parte and strongly biased either for or against. I have always maintained that it was essentially a problem in practical sociology and not a medical problem but that the medical profession should be thoroughly informed on the question and especially should be able to take its own position.

Unfortunately in the majority of states in which this question has come up for discussion, the medical profession has been divided into two camps; the first, a small one who were strongly influenced by the attitude of the theoretical sociologists in favor of the plan and an overwhelming majority who were opposed to the proposition without investigation, because they feared it would hurt their business. My *personal* opinion is that the advocates of social insurance have as yet failed to make out a case on the two essential points which I tried to outline in my first letter; First that there is a problem of sufficient importance in this country to demand governmental intervention; and second that the proposed social insurance plan is the best remedy for the situation. Until this can be proven, there is no basis for an argument in favor of Compulsory State Social Insurance."

On January 29, 1920, in answer to questions from the Chairman of the Committee on Civic and Industrial Relations relative to the activities of Dr. Lambert, President of the American Medical Association, and Dr. I. M. Rubinow, whose pamphlets on Compulsory Health Insurance are sent out by the A. M. A.,

Dr. Green wrote:

"Regarding Dr. Lambert's personal position, I am hardly qualified to speak. I should say from close association with him for many years

that he is intensely interested in the question (Compulsory Health Insurance) and feels keenly its immense social importance. I think in the beginning he had a leaning toward some form of state controlled distribution as the cost of illness. Whether he is at present supporting the so-called Davenport Bill in New York, I do not know. The Medical Society of the State of New York has definitely gone on record against it. Regarding your fourth question, I know of no reason for assuming that Dr. Lambert is representing the American Association for Labor Legislation.

My *personal feeling* ever since this discussion was *begun over ten years ago* has been one of suspended judgment up to the last year. Since the publication of the reports of the various commissions and the broader discussion of this subject, *I am unable to see that the advocates of social insurance* have proven either the need for such a plan in this country or that, if adopted, it would prove a remedy for the conditions complained of."

The advice of the secretary of the Council on Health and Public Instruction not to take a stand for or against a measure which promised to vitally affect the medical profession was to say the least puzzling. In the search for information, the Chairman wrote Dr. M. Hemingway Merriman, President of the West Side Clinical Society of New York City. This Society disclaims any connection with politics and are definitely opposed to Compulsory Medical Insurance. They have expressed their views in a well thought out pamphlet entitled Information, Argument and Resolutions regarding the State Health Insurance bill.

Dr. Hemingway referred the letter to Dr. Eden D. Delphy, Chairman of the Health Insurance Committee of the Medical Society of the County of New York.

Under date of January 27, 1920, Dr. Delphy wrote:

"For some time past we who are working for the best interest of the medical profession have been aware that there has been some *insidious* under current of influence which has seriously militated against our success in our work. At a meeting of the State Society last April a resolution was introduced as follows: Resolved;

"That the delegates of the Medical Society of the State of New York be and are hereby instructed to introduce a resolution in the House of Delegates **OPPOSING** the scheme of Compulsory Health Insurance and to support it in every way possible."

But although this resolution was carried by an overwhelming majority, all they did was to introduce into the House of Delegates of the A. M. A. their resolution of instructions. You will see what was done with it in the House of Delegates as indicated by the 'proceedings' in the Journal, June 21, 1919, page 1836. We expect to adopt a similar resolution at our Annual Meeting this year and if we can get the assistance of your and other State Delegates, it will not suffer such a humiliating disposition."

This is the situation that confronts the medical fraternity of the United States to-day. The Secretary of the Council on Health and Public Instruction of the American Medical Association advises Michigan to take no stand for or against Compulsory Health Insurance, while its sister State, New York, is entering on its fourth year of fighting against a measure which it believes will do untold harm to its people and to the medical profession. The President of the Great Central Organization, The American Medical Association, permitting his name to be used on the letter head of an organization. The American Association for Labor Legislation which is fighting for the measure and against the medical profession. The appointment by Dr. Lambert of Dr. Rubinow as Executive Secretary of the A. M. A. Committee to study and report on Social Insurance, in the face of the fact Dr. Rubinow had been an advocate of the scheme for fifteen years. A leopard may change his spots but a statistician who has proved his point by figures, never. The sending out of the Lambert-Rubinow pamphlets by the Council on Health and Public Instruction and the fact that the same pamphlets are being sent out by the American Association for Labor Legislation.

The Secretary of the Council on Health and Public Instruction states that after ten years of study, he has arrived at the conclusion that there is no cause for action on Compulsory Health Insurance. Are the great rank and file, men who work hard, pay their dues promptly, read their American Medical Journal, getting the benefit of this change of mind—are the rank and file in other states being given the history of the fight being waged in New York. Are delegates who defy positive instructions from their State Society taken to task for their action. The answer is No. Academic discussions are there but no news.

Some may say we have troubles enough of our own, why borrow those of New York. The strength of the wolf is the pack and the

strength of the pack is the wolf. The American Association for Labor Legislation hopes in time to worry New York into quitting. Then it will enter another state and worry that state into submission and then another until its ultimate goal is reached in an amendment to the Constitution of the United States and then Compulsory Health Insurance, the child of Otto, Prince von Bismarck and Political Necessity will rule in a land which produced Abraham Lincoln, the individual, who had the good fortune to live in a time when the individual counted.

Let the House of Delegates of the American Medical Association stop this guerilla warfare. Come out in the open and fight for or against. The time has come for a show down and then let the medical profession fight as a unit and not like a number of loosely connected allies.

GEORGE E. FROTHINGHAM.

KALAMAZOO ACADEMY.

Under our department of County Society News there is given a full report of the activities of the Kalamazoo Academy for the year 1919. Although a little late the report did not reach us until this month.

We are calling attention to this report because it reveals in splendid detail, the activities of an aggressive organization.

After reading the report of the officers direct your attention to the subjects discussed, the essayists, and the men who participated in the discussion. In our opinion that information explains the life and activity of the academy—live topics, and full discussions.

We have other societies equally as active for the same reason. What we desire to disseminate is—those of our county societies who are looking about for a plan of activity may gain an incentive from this report.

Bristles.

All of us are breathing a sigh of relief, now that the "Flu" has abated to a degree and we are not being awakened from a catch-as-catch-can slumber by a frantic call on the telephone in the wee small hours of the night, after we have just finished wearing out about \$25.00 worth of automobile tire in our calls during the day.

In a respite of this sort, we probably are best

able to collect our thoughts on subjects concerning ourselves.

When we think back just one year and see the difference in severity between the epidemic of then and now, are we able to visualize what the medical profession has done in the way of progress; in having developed, after much investigation and research, better methods with which to combat this dread disease, which last winter virtually succeeded in throttling our people.

From the gigantic proportions of the dread antagonist, the profession was quick to realize that only by a concerted, almost superhuman effort would they be able to cope with the situation and they were not long in putting their shoulders to the wheel and fighting for a common cause.

To have thus conquered for the sake of humanity should go to posterity as one of the real achievements of this or any other age. It is something to which each one, who fulfilled his little part, can point with pride, knowing that his efforts, no matter how small, were, by being welded into the whole scheme, able to accomplish this great step in the right direction.

It is unnecessary, then, fellow members, for us to endeavor to tell you what CAN be accomplished. You have SEEN. You have been, in fact, an integral part in one of the greatest boons to mankind. If co-operation and intelligent combination of effort can do so much for you in one small stratum of your endeavors, why will it not be the means of advancing you always, both professionally and economically.

It will. There is no "if" to be considered. It is only necessary to do your rightful share. Give us your co-operation in our undertakings. They are for you—one of us.

Editorial Comments

In recent issues we have been publishing extracts and summarizations of some of the more interesting articles that are appearing in medical literature. We hope to be able to continue to do so. The point we wish to make and acquaint our readers with is that these articles are prepared for us by Dr. Leo C. Donnelly of Detroit. We have attempted to give him credit but often his name has been omitted by typographical necessity. We want to acknowledge this labor and express our appreciation to the Doctor.

Our April issue will contain the preliminary program for our annual meeting at Kalamazoo,

May 25, 26, 27th. The Program Committee met in Kalamazoo on Feb. 3d and completed the details of the meeting.

An attendance of at least one thousand members is being planned for our Kalamazoo Annual Meeting.

When druggists are charging one dollar for four ounces of soap linament and one dollar and a quarter to one dollar and a half for a four ounce mixture of ordinary drugs they are not missing an opportunity of indulging in profiteering. "Everybody is doing it" and a good many of our druggists are well up in the front ranks of the "profit grabbing mob."

In spite of the announced opinions of authoritative serologists that vaccination or sero inoculation for "flu" and pneumonia prevention is valueless, many there are who recommend and give these serums. We cannot help but wonder if it is just fair, if it is right, to say nothing of scientific practice, to employ or administer a serum or vaccine of unproven merit and accept payment for such service. Such practice borders very closely upon commercialism. And speaking of commercialism the practice is becoming more prevalent. The attitude seems to be developing of "get the money first" and fit the treatment so that the greatest financial returns ensue. Woe betide the day when the profession degenerates to dollar idolatry. Our farmers are demanding "equal pay for an equal day." The profession might adopt the slogan "Equal pay for equal service" and unless we do we need not sob if legislation steps in to limit our sphere and activity. "Shooting" the serum at two dollars per is not honest or scientific practice, especially when our serologists state that such practice is only effective in a limited number of conditions. In addition one violates the confidence of our patients and stoops to fake salesmanship.

Seventeen dressings for a one inch scalp laceration with no complications and a bill of thirty-four dollars, when experience and knowledge of rapid repair of scalp wounds has established five dressings at the most as the average requirement. Forty-one dressings and a bill for \$82 for suture of a two and a half inch laceration of the fore arm without involvement of the deep structures or vessels. Do you wonder manufacturers are employing nurses in our larger factories to care for these minor industrial injuries. These bills

were shown us by an Ohio Superintendent with the query—"What do you think of these for 'hold-ups.'" It resolves itself into the conclusion that some there are, who are "farming" their industrial cases and charging for unnecessary redressings. We subscribe to full fees but also admit that full service must be rendered in return, without any padding.

The Genesee County Society is right up in the front ranks of our active societies. We refer our members to their reports in our County Society news pages. We repeat—society activity among our state units is flourishing. May there be no trailers.

Now comes along a couple of colonels of the regular medical corp with a new plan for reorganization of the Medical Reserve Corp and a carefully worded admission of the organizational administrative defects and failures of the corp during the recent war. The whole article is full of the "old army" system and outlines a plan which puts the whole plan in new words but permits the proposed reorganization to still retain practically all the features towards which criticism is directed. What we need is some new heads who are unbiased by the army "customs and courtesies" of the past. When such a change occurs we may hope to have a reserve corp in which membership will be an inducement.

From announcements sent out, those who attend the University Clinics each month, may obtain comfortable quarters at the Michigan Union. Reservations should be secured in advance from the Superintendent of the University Hospital. This arrangement creates extra inducements for attending these Clinics.

The Wayne County Medical Society passed a resolution pledging support to carry out the provisions of the Venereal Law and endorsing its provisions and intent.

At the time this is written the daily press have just announced the details of the Lansing resignation and President Wilson's threat to withdraw from European affairs. Would it not be well that his medical advisors recommend his retirement from public life. Now that we have been given a partial insight as to the nature and extent of his illness we cannot help but conclude that his mentality is no longer "prodigious" and that physically as well as mentally he is too ill to longer exercise his powers as President. Admiral Grayson is assuming a grave responsibility in permitting his distinguished patient to devote any time to executive duties.

Correspondence

Calumet, Feb. 4, 1920.

Dr. F. C. Warnshuis, Editor,
Grand Rapids, Michigan.

Dear Doctor:

I thought you would be interested in knowing of the action which the Houghton County Medical Society has taken in regard to its fee bill. We had the bills printed with schedule of fees and the signatures of practically every physician in the County including non-members of the local society. The fee bill specifies that its provisions are not binding in the case of indigent worthy individuals, and the physician has the right to estimate the actual value in time and skill employed in a long continued series of treatments or calls.

At the January meeting the following resolution was introduced:

Resolved: Whereas, a schedule of fees to be charged by the members of the Houghton County Medical Society has been endorsed and subscribed to by every member of said county and

Whereas certain members of this society are giving their services to certain lodges and organizations for a stipulated ridiculous fee and in some instances even gratuitously, thereby certainly detracting from the dignity of our profession as well as doing gross injustice to those of our colleagues who refuse to accept such practice with its belittling compensation, and

Whereas, we believe that such procedure on the part of certain members renders absolutely inconsistent the fee bill which this society has individually and collectively agreed to observe.

Therefore be it resolved by this Society that our secretary with his monthly notice of meeting inform each member that the matter will be taken up at our next regular monthly meeting and such ways and means shall then and there be adopted to correct this condition as shall be approved by a majority vote of members present.

At our February meeting held Feb. 2, 1920, the above resolution came up for discussion and the following resolution was introduced and by an overwhelming majority it was voted that the resolution should be the basis of the enforcement of the provisions of the fee bill.

Resolution:

RESOLVED, that it be the sense of this Society, that any member who contracts for a monthly or yearly fee to render medical or surgical or obstetrical treatment to the personnel of any lodge or industrial organization, or their families, other than mines and mills, which custom for years, here, has rendered professionally ethical, or who shall give gratuitous service to

any organization whatsoever, unless it be of a philanthropic charity order, shall be automatically dropped from membership in our Society, by reason of being unethical and absolutely unfair toward other members, in the sense of having rendered inconsistent and of no import, the fee-bill of this Society, which every member has mutually promised to observe.

The subject of compulsory health insurance was also brought up and it was agreed that it should claim the entire attention of our March meeting at which time the local society will put itself on record in regard to this matter which is so little understood and which is of such vital importance to both the general public and the medical profession.

Fraternally,

Houghton County Medical Society.

R. M. Howell, Secretary.

PROFESSIONAL GUILD OF KINGS COUNTY.

1313 Bedford Avenue,

Brooklyn, New York.

Medical Society of the County of Kings,
Kings County Pharmaceutical Society,
Kings County Dental Society,
Greater Ridgewood Medical Society,
Greenpoint or North Brooklyn Medical Soc.,
Bay Ridge Medical Society,
Second District Medical Society,
Homeopathic Medical Society,
Pharmaceutical Society East New York,
Flat Bush Medical Society,
East New York Medical Society,
Williamsburg Medical Society.

Feb. 11, 1920.

My Dear Dr. Frothingham:

Pardon this belated reply to your letter of the 5th.; we have had a busy time with the flu in this part of the country. I have sent you, however, some literature which forms a part of the Campaign of Education of Our Guild and am enclosing you a chart prepared by Dr. E. Mac D. Stanton of Schenectady, New York, who is doing the same kind of work in this county. Just total the figures thereon and you will find that the 14 companies doing "Compensation Insurance" received in premiums \$10,894,000 or an average of \$778,143—that the average loss ratio was 46.70 per cent. and the average expense ratio was 24.21 per cent. of the premium. Compare this with the conservative estimate of the probable expense of administration (16%) on my chart and you will see that we are on the right track as to the uneconomic features of this Compulsory Health Insurance. In a day or so I will mail you a blue

print of another calculation which will show the transit from raw material to the ultimate consumer which answers the ONLY argument that we have been able to elicit from the proponents of Compulsory Health Insurance on the element of the COST of the scheme except the puerile reply of Senator Davenport (the father of the bill) that the "cost is distributed in increased efficiency and good will."

Davenport is Professor of Political Economy at Hamilton College (New York State) which is one of the beneficiaries of the "sage Foundation" which is also a contributor to the American Association for Labor Legislation of which Dr. Alexander Lambert is an officer (member of the General Administrative Council).

I have had 25 copies of a reprint of Dr. Heeve's speech and my own (the symposium of the L. I. Med. Journal) sent to you. If you wish some copies of the Chart (mine) which I sent you, we have the electrotype and can run off as many as you wish. As you know "pigs is pigs" and "Compulsory Health Insurance" is the same whether in New York or in Michigan or in New Jersey, with this exception, that the American Association invariably tries to put over the broadest kind of a bill and is prepared to cut and fit and change IF ONLY THE MEDICAL MEN WILL HELP PASS THE NAKED BILL they will see to it that clothing, in the shape of amendments, is supplied once the policy is fastened on a State. They boast that a compulsory health insurance bill is being introduced in a number of states, so far, thank God, no state has been silly enough to let it pass. It is rather shameful that we have to spend our time, money and energy in educating ourselves and the public to its viciousness, but it is a part of our duty as the Monitors of the Public Health.

As to Dr. Lambert: At the hearing on the Davenport-Donahue Bill in Albany last March (19th), despite the fact that the A.M.A. is on record against the measure, he appeared, resplendent in a Y. M. C. A. uniform (as a Colonel I think) and proceeded to use the glamour of his Presidency of the A. M. A. to fortify his advocacy of the bill. On Oct. 21st, through some pussyfooting of the officer-body of our County Society (which is on record against the measure) (and a member of our guild as well) Drs. Lambert, Madill and Gaylord were invited to speak on Compulsory Health Insurance. Gaylord did not appear and Dr. Kosmak took his place. It was staged as an ex-parte exposition of the PROPOSERS viewpoint but we have one fine Guild in this county made up of the Medical, Dental and Pharmaceutical Societies, as such, and the Doc-

tors, Dentists and Druggists as CITIZENS, in a chapter of the guild in each of the Assembly Districts of the county. I organized them and I know them and they know me and when I said I wanted to answer these people the Chapters were a unit in demanding my appearance and the Officer-Body made a virtue of necessity and yielded. When we got through, the Medical Society of the County in Executive Session passed a resolution which contained everything but the cash register and **bound our delegates to the State Society uncompromisingly against Compulsory Health Insurance.** Result the New York County followed suit and the State Society's Special Committee to study and report on the matter presented a "Report," a copy of which I enclose.

In New York State, we expect to beat the American Association for Labor Legislation but unfortunately we had no constitutional provision for a referendum (as California had) and we must make up our minds to defeat this pernicious legislation, we must defeat the instigator (the A. A. L. L.) and bring before American minds the German origin of both and the pro-German, pro-unrest affiliations of those who Officer it and drive home the utter wastefulness in money and morale of this hysterical type of legislation **AND WE MUST KEEP AT IT, YEAR AFTER YEAR AND BECOME CITIZENS OF OUR STATE AS WELL AS CITIZENS IN IT.** The sacro sanct idea of wrapping the mantle of scientific absorption about us and drawing a sacred circle of Medical Ethics about us and tabooing Civics (aye or Politics) is unfair to ourselves and to the people who depend upon us to safeguard them in matters of health. Here in New York State we have pretty well relieved ourselves of the just reproach which was voiced to me by a Senator at Albany, March 19, last, before the "Hearing on the Davenport-Donahue Bill," when he said:

"Doctor, you are dearest beings on earth and we love every hair on your head—personally—but as a "Class" you are PITIABLE. You spend your time, money and energy in sustaining Scientific Societies for the advancement of Science and the good of your fellow man **AND YOU DON'T KNOW THE FIRST THING ABOUT THE LAW OF SELF PRESERVATION.** You are wasting your time in Albany. I have reason to believe the Bill will not pass **THIS SESSION. GO HOME AND ORGANIZE** and come back next year and we will have to listen to you."

We did. I am, have been and expect to remain a Democrat but I was largely instrumental in

organizing and directing a Campaign which **RETIRED TEN DEMOCRATIC CANDIDATES FOR ASSEMBLY FROM THIS COUNTY AND NO CHAPTER INDORSED OR OPPOSED (OFFICIALLY) ANY CANDIDATE;** neither did the guild. But when the underground telegraph got through and our patients and our friends registered their confidence in us, when they cast their ballots on Nov. 4 for Assembly District Candidates, the Political leaders woke up to the fact that the March of Paternalism had taken one step too far and had swung into action a group of citizens, who by virtue of their education and training are the best qualified teachers in Society. I think you will agree with me that the Guild plan is good for Michigan. We now have a State Central Committee (of which I am chairman) made up of the Public Health Committee Chairmen of similar organizations of Medical Citizens in each of the 62 counties in the State. Every Medical, Dental and Pharmaceutical Society in this county has passed an identical resolution, designating our Guild as its spokesman at any hearing in Albany on this measure. Some Unity? Some force? Some Organization? This is not bombast, because what the politicians indulgently regarded last summer as a Pink Tea has come to be respected as a force to be reckoned with and there is not one single Club usable against the Guild which was non partisan and big enough and **WISE ENOUGH** to reject all offers of political affiliations and strong enough to resent threats of political reprisal. The real secret is that the people still love their Doctors and believe in their sincerity of purpose and they are not unmindful of the devotion and self sacrificing which marked their work during the dreadful epidemic of "Flu" last Winter.

I shall be glad to hear from you and will see to it that all the literature we issue is mailed to you.

Fraternally,

John J. A. O'Reilly,
405 Union Street,
Brooklyn, New York.

Deaths

Doctor W. J. Herrington, of Bad Axe, died February 10 at the Hubbard Memorial Hospital after a short illness of pneumonia.

Doctor Herrington was 61 years of age, and

was a graduate of the class of 1882 of the University of Michigan.

His widow and five children survive.

Doctor Bruce R. Leighton, of Kalamazoo, died January 24th at the New Borgess Hospital at the age of 37 years.

Doctor Leighton was born at Hopkins, was a graduate of the Western Reserve University of Cleveland and had practiced at Kalamazoo about seven years.

Besides the widow, the doctor leaves his parents, Doctor and Mrs. Leighton of Hopkins, Mich.

Doctor Philip Gray Sanderson died at his home in Detroit, January 28th, of pneumonia, having been ill but three days.

He was 52 years of age, was born in Detroit, and was a graduate of the University of Illinois, class of 1898.

The widow, Doctor Suzanne M. Sanderson, a mother, a brother, and two sisters survive him.

Doctor Leon B. Harris, city physician of Saginaw, died at the Saginaw General Hospital, January 12th.

Doctor Harris was born in Saginaw October 23, 1886, and was a graduate of the University of Michigan. He enlisted in the medical corps of the United States Army in August, 1917. He was first stationed at Fort Riley, Kansas, and in January, 1918, was transferred to Camp Logan, Texas, and in June, 1918, went to France.

He leaves a widow, a daughter, his parents and one sister.

Doctor James Fraser, of Lexington, Mich., died at his home January 27, after an illness of several weeks. Doctor Fraser had been failing in health for a number of years but attended to his practice until about Christmas time.

Dr. Joseph Harris Cowell.

In the death of Dr. Joseph Harris Cowell, of Saginaw, January 17th, the profession in Michigan has lost one of its most prominent and valued members.

Dr. Cowell was born in 1847, and received his literary education at Brown University, graduating in 1869. He was a member of Zeta Psi. Subsequently he graduated from the Medical Department, University of Michigan, 1871, and since then has been practicing medicine in Saginaw almost continuously.

As a youth of fifteen, he enlisted in the U. S. Army, and served with distinction in the War of the Rebellion.

From 1901 to 1913 (three terms) he was an active member of the State Board of Registration in Medicine. His service on the medical board was of a high order, ever advocating and supporting measures involving higher standards of medical qualifications for practice in Michigan.

Dr. Cowell's status as a citizen and a physician in Saginaw, and throughout the State, was exceedingly high, and his passing will be a matter of deep and lasting sorrow to a very large and influential clientele, whom he served faithfully and efficiently for some fifty years. The Biblical quotation, "Well done, thou good and faithful servant," is especially applicable to Dr. Cowell's life and practice.

Doctor Miles C. Bristol, of Bay City, Mich., died last month at the age of 52 years.

Doctor Bristol was a graduate of the class of 1894 of the Long Island College Hospital after which he took a preparatory course at the Cornell University. He was serving his second term as coroner of Bay County and was also a member of the Bay City Board of Health.

Doctor R. F. Boonstra, of Detroit, died of pneumonia January 30, 1920. He was a graduate of the Literary and Medical Departments of the University of Michigan. He received his M.D. from that institution in 1913. He was formerly head physician for Frederick Stearns & Co. of Detroit and a volunteer in the medical aviation research bureau. At the time of this death he was a Detroit Health Department physician.

Doctor Benjamin Brodie was born in Detroit, April 6, 1859, and died in San Francisco, Jan. 22, 1920. He was the son of Doctor William and Jane Whitfield Brodie. He was educated in the public schools of Detroit, graduated from the University of Michigan receiving the degree of A. B. in 1882. He obtained his M. D. from the Michigan College of Medicine in 1884. He was married to Mrs. Anne Tallant Tubbes in Washington, D. C., on Nov. 14, 1907. He practiced in Detroit until a few years ago when he removed to California. He was a member of the staffs of Harper Hospital, St. Mary's Hospital, Women's Hospital, and the Solvay General Hospital. He was Chief Surgeon for the Detroit United Railway and the Detroit Fire Department. He was House physician for many years to the old

Russell House. He was local surgeon for the Grand Trunk Railroad. He was a member of the Wayne County Medical Society, the Michigan State Medical Society, and the American Medical Association. He was a member of the Detroit Club, Yondo tega Club, University Club, Country Club, Detroit Boat Club and the Harmonie Club.

The deaths of the following doctors not members of the State Society have been reported: J. H. Cowell, of Saginaw, and R. F. Boonstra, of Detroit.

State News Notes

General practice, hustling village, rich farming community. Ionia County. Collections over \$7,000 last year. Office and contents for sale. Electric lights. City water. Care Journal.

COLLECTIONS.

Physicians' Bills and Hospital Accounts collected anywhere in Michigan. H. C. VanAken, Lawyer, 309 Post Building, Battle Creek, Michigan. Reference any Bank in Battle Creek.

MEDICAL LEGISLATION.

At the general meeting of the Wayne County Medical Society held Monday evening, January 19, a free discussion was indulged in on the subject of legislation introduced and passed during the legislative session of 1919, the object of which legislation was the suppression of venereal disease. The speaker of the evening was Dr. Guy Kiefer, member of the State Board of Health. Dr. Kiefer outlined the nature of the legislation, which came into effect October last. He went thoroughly into the purpose behind each legal enactment and stated that all such legislation was tentative and subject to modification. In some instances the law should be made more strict, in others it should be modified. He spoke of the effectiveness of recording all communicable diseases for several reasons. Among these the reporting of all cases aids in the compilation of accurate statistics without which no progress could be made. The insisting upon treatment by keeping all cases under observation tended to curtail disease. He called for a full and free discussion, especially from those who had objections to the new measures. One speaker objected on the grounds of the alleged illegality of revealing to a third person what should be kept

sacred between patient and physician. He thought it was an invasion of the private rights of physicians, namely, the compulsory reporting of cases of venereal disease. This objection was overruled on the ground that the safety and welfare of the people was the supreme law. The consensus of the meeting was overwhelmingly in favor of backing up the State Health Board in its efforts to reduce the venereal evil to a minimum, and a resolution was passed favoring this action.

Flint physicians have united upon a plan for providing a medical building as imparted by the following Press item:

Money has been subscribed by physicians, surgeons and dentists of the city for the erection of a six-story brick building at Detroit street and Fourth avenue to be used exclusively by them for the practice of their professions. Construction will be begun as soon as arrangements can be completed, probably within a few weeks.

The project really was started a year or more ago when half a dozen men discussed its feasibility as a topic of conversation. It had been discussed from time to time until Tuesday night, when definite steps were taken at a meeting of about 25 physicians and dentists. Further action was taken at a meeting of the Genesee County Medical Society in the Dryden building yesterday when subscriptions were signed.

At the former meeting the Flint Medical Building Association was organized with the following temporary officers: Dr. M. S. Knapp, chairman; Dr. L. R. Himmelberger, Secretary; Dr. J. C. Benson, Treasurer. More than \$25,000 was subscribed for shares in the **proposed stock company** of \$1,000 each. Subsequently more than twice that amount was taken.

Articles of incorporation have been filed with the Secretary of State in Lansing. As soon as the necessary papers are returned a permanent organization will be perfected and active measures taken to proceed towards construction. It is expected that the plant will cost upwards of \$100,000 and funds will be obtained from a finance corporation.

The former Alva Davis home on the northwest corner of Detroit street and Fourth avenue, one of the old landmarks in Flint, was purchased for the site. The property has a frontage of 132 feet on each street. The main object in locating there was to get away from the noise of business streets.

The main building will be 40 feet wide on Detroit street and extend back on the inside line

of the lot 100 feet. An ell to the north will be built from the rear end. In this ell will be the entrance lobby and two elevators. This plan will afford opportunity for expansion by building another wing from Detroit street parallel to the original building.

A common reception room, with attendants, will be provided on each floor. A corridor 12 feet wide will extend the entire length of each floor, and opening off it on either side will be the various offices. Settees, both long and circular, will be placed in the corridors. One room in the building, possibly one on each floor, will be devoted to library purposes, with books, periodicals, etc. A laboratory for bacteriological work is in the plans.

All lines of specialties in the medical and dental professions will be represented. The only benefit to be derived by the occupants will be closer associations and opportunities for discussions.

Original subscribers were 37 physicians and 13 dentists, but this list has since been augmented. Others who were not able to attend the meetings, because of illness or absence from town, are expected to subscribe. The 50 were: W. H. Marshall, C. D. Chapell, A. S. Wheelock, Harry W. Knapp, J. S. Beckwith, Robert G. Brown, E. G. Dimond, Leon M. Bogart, B. E. Burnell, A. J. Reynolds, J. H. Taylor, H. T. White, Harry S. Read, F. B. Miner, Carl F. Moll, Dwight G. Goodrich, Robert L. Phillips, George R. Goering, Frank E. Reeder, Henry J. Cook, George J. Curry, R. A. McGarry, W. H. Winchester, Lafon Jones, M. Wm. Clift, F. A. Roberts, H. E. Randall, J. C. Benson, C. P. Clark, H. D. Knapp, J. G. R. Manwaring, D. D. Knapp, C. C. Probert, L. R. Himmerlberger, M. S. Knapp, W. M. Miller, A. C. Blakely, J. J. Kurtz, H. J. Clark, J. H. Houton, E. C. Ryle, H. J. Mogford, R. A. Stephenson.

Announcement is made of the launching of the National Anesthesia Research Society, with the avowed purpose of collecting data and prosecuting original research in this field of medicine. The objects of the Society as set forth in the constitution are:

"To promote the science of anaesthesia and to enable its members, after first having obtained the approval of the Society, to submit without prejudice to the dental and medical professions, any views, findings, or accomplishments they have attained; to obtain from all available sources such information as is now extant concerning any material, liquid or gas, known to have anaesthetic properties; to arrange, in co-operation with dental, medical, and anaesthesia associations for the preparation and delivery of suitable, ininteresting and educational papers on the general subject, or relative to some particular anaesthetic; to use influence to prevent

the publication or circulation of any false or unauthentic statements concerning any and all conditions, symptoms, or phenomena prevailing during or after anaesthesia by any anaesthetic, and to prepare and distribute on request, forms on which such information can be tabulated with uniformity; to distribute by pamphlet or publication, as its funds may permit, and its governing powers authorize, such reliable data as it may collect or obtain through its members or others interested in the subject of anaesthesia, for use by the medical and dental professions; to co-operate with state authorities and other bodies in the preparation of suitable legislation to safeguard those to whom anaesthetics are administered as well as those called upon to administer them; to use its influence in every way and to give its aid toward the advancement of the Science of Anaesthesia."

The Research Committee which will have supervision of original work and the editing of material designed for the profession and professional press, is headed by F. H. McMechan, A.M., M.D., of Avon Lake, Ohio, editor of the Quarterly Supplement of the American Year Book of Anesthesia and Analgesia. W. I. Jones, D.D.S., president of the Inter-State Anesthetists' Association, will have an active part in the committee's work. Representative anesthetists of the country, who have distinguished themselves by research and progress in their field, are being invited to join the committee.

The Society has been endowed with limited funds which will permit it to demonstrate that there is a field of usefulness for it.

Calhoun County Society passed the following resolution:

Whereas, for the first time in history a graduate physician is a candidate for the nomination of President of the United States, and

Whereas, the Calhoun County Medical Society believes he would be as thorough and efficient as President as has been his record of military service, both as a medical officer and as an officer of the line, Therefore

Be it Resolved, That the Calhoun County Medical Society does, in meeting assembled, without regard to party affiliation, endorse the candidacy of Major General Leonard A. Wood for the nomination for President of the United States, and

Be it Further Resolved, That copies of these resolutions be sent to the Leonard Wood League and to the Chairman of the National, State and County Republican Committees.

The resolution was passed without a dissenting vote. The President was instructed to appoint a committee to take care of this matter. The Committee appointed consists of Dr. A. S. Kimball, Chairman, Dr. W. S. Shipp and Dr. James A. Elliott.

A committee of trustees of Queen's University, at a meeting held Jan. 3, 1920, unanimously agreed on plans for the reorganization and improvement of the medical school at Kingston. A full-time dean and an adequate number of full-time clinical professors are to be secured. The university expects to obtain entire control of the Kingston General Hospital; the hospital pathologic department will be further developed; a new system of records, including a complete follow-up record, will be installed, and a superintendent obtained who will be responsible for the medical administration of the hospital under the supervision of the university. It is estimated that the cost of rebuilding the hospital will be approximately \$750,000, of which sum \$550,000 is already assured. The expense of securing additional full-time clinical professors and the further development of the pathologic department will be approximately \$35,000, making a total estimated expenditure of \$785,000.

The Council on Medical Education of the American Medical Association, The Association of American Medical Colleges and the Federation of State Medical Boards will hold their annual meeting at the Congress Hotel, Chicago, on March 1, 2 and 3, 1920. This Conference promises to be a meeting of unusual interest.

The following men will give papers: Doctors Bevan, of Chicago; Strickler, of Denver; Colwell, of Chicago; Vincent, of New York; Jessup, of Iowa City; Darrach of New York; Klotz of Pittsburgh; Robinson, of St. Louis; Wilson, of Rochester (Minn.); Bierrinf, of Des Moines; Shepardon, of Springfield (Ill.); Baldy, of Philadelphia; Bardeen, of Madison (Wis.); Waite, of Cleveland; Carter of Galveston; Lyon, of Minneapolis; Folin, of Boston; Edmunds of Ann Arbor; Ewing, of New York; Kendall, of Chicago, and V. C. Vaughan, of Ann Arbor.

CELEBRATE THIRTIETH ANNIVERSARY.

The Thirtieth Anniversary of the founding of The Abbott Laboratories is being celebrated this month. This firm has recently established the precedent in the pharmaceutical field of placing their employes on profit sharing basis.

It is a notable fact and one worthy of commendation that more new medicinal chemicals, and council-passed products have come from the house of Abbott during the past five years than from any other firm in this country.

Unusual success attended the Junior Hop of the Detroit College of Medicine and Surgery, held Friday evening at the Hotel Statler. Valentine suggestions were observed in the decorations and also in the favors for the ladies, which were red heart-shaped boxes of bon-bons. The men received cigarette holders.

Assisting as patrons and patronesses were Dr. and Mrs. W. H. MacCracken, Dr. and Mrs. J. E. Davis, Dr. and Mrs. W. J. Seymour, Dr. and Mrs. Neal Haskins, Dr. and Mrs. Roy Andries and Dr. and Mrs. W. H. Manton.

The committee directing the ball comprised Leon F. Cobb, Miss Igma Wuerniss, Emil Rothman, Edward L. Rodd and Amherst Merriman.

Dr. J. V. Deacon, for many years connected with the Kansas State Board of Health, has accepted an appointment with the State Board of Health of Michigan. Dr. Deacon will have supervision over the "Communicable Disease" Division of that Department, and his many years experience in Public Health work will make him a most valuable member of that Board.

Washington University has received \$300,000 for the endowment of the department of pharmacology of its medical school. Half the sum was given by the General Education Board and half was raised by the medical school.

Dr. Robert Rosen announces his return from military service and the opening of his offices in Detroit with practice limited to Urology.

Dr. Frank Wade of Howe sustained a fractured arm when his sleigh tipped over.

Dr. W. A. Grant, formerly of Detroit, has located in Lyons.

Dr. Don M. Howell of Detroit has located in Grayling.

Dr. L. C. Harvie has been appointed city physician in Saginaw.

Dr. B. A. Miller has located in Monroe.

COUNTY SOCIETY NEWS

It is the Editor's desire to have this department of the Journal contain the report of every meeting that is held by a Local Society. Secretaries are urged to send in these reports promptly

ALPENA COUNTY.

The regular meeting of the Alpena Medical Society was held January 15th at the New Alpena House. Thirteen members responded to roll call out of a possible sixteen. The application of Dr. Ernest Foley of Alpena for membership was received and accepted.

On motion the Secretary was instructed to correspond with the Secretary of the Tuberculosis Department of the State Board of Health, asking Dr. Vanderslice to visit Alpena and hold a public clinic for diseases of the chest.

The President of the Society, Dr. Geo. Lister of Hillman, being detained to explain to the court, why certain venison was found at the camp without a license attached, sent in a letter of appreciation for his election, and made some suggestions for improving the meetings for the coming year.

The Alpena Hospital Association requested the Medical Society to appoint a committee to meet with them to discuss hospital administration. Drs. McKnight, Bonneville, and Dunlop were appointed.

Dr. J. D. Dunlop then read his paper on the Father in the home. The paper dealt with the lack of information of many fathers regarding the physical well-being of his children. The various points were thoroughly discussed by the members present.

The next meeting of the Society will be a party for the doctors and their wives. Mrs. Bell, McDaniels, and Williams were appointed the committee to make the arrangements.

ALPENA COUNTY.

The Alpena Medical Society enjoyed the first of a series of social gatherings in charge of the ladies, at the Trinity Parish House Tuesday, Feb. 17. Mrs. S. T. Bell, Mrs. F. J. McDaniels, and Mrs. C. M. Williams, were in charge. Dinner was served at 6:30 at the parish house, 25 being present. Following dinner the ladies supplied a short entertainment of musical numbers, after which cards and social conversation completed an enjoyable social evening.

BAY COUNTY.

Our annual meeting was held Monday evening, December 15, 1919, at the Winona Hotel at

which time the retiring President, Dr. C. M. Swantek, tendered the Society a sumptuous banquet. After the President gave a short terse address bearing on the present healthy activity of Bay County Medical Society the Secretary gave his report under three heads:

1. Report of Patriotic Fund.
2. Financial Report of Society itself.
3. Miscellaneous Report.

It was moved by Dr. C. H. Baker and supported by Dr. W. R. Ballard that the Secretary send his report to the Michigan State Medical Journal. Carried unanimously. I enclose for Journal with parts deleted for you to make use of what you as editor may regard as of any importance.

Second head was a full report of our local Society's financial standing. This report was very satisfactory to all members and of no interest to any other society; therefore it is not enclosed.

After Secretary's report, Bay County Medical Society elected the following officers for the ensuing year, viz. 1920:

- President—Dr. R. E. Scrafford.
- Vice-President—Dr. G. W. McDowell.
- Secretary and Treasurer—Dr. Morton Gallagher.
- Medico-Legal—Dr. T. A. Baird.
- First Delegate—Dr. C. M. Swantek.
- Second Delegate—Dr. M. Gallagher.
- First Alternate—Dr. G. W. Moore.
- Second Alternate—Dr. R. W. Brown.

Mr. President and members of Bay County Medical Society: I wish to make my report to you as your Secretary and Treasurer under the following heads:

1. A short resume of Patriotic Fund.
2. Financial Report of your Society.
3. Miscellaneous Reports.

Under the first heading, viz. Patriotic Fund, your Councillor for this district, Dr. John McLurg has informed us that Bay County Medical Society has been the only Medical Society in the State of Michigan, and as far as we know, of any other State which made up the difference in salary between a lieutenancy and captaincy of those of our members who so valiantly gave up their lucrative practices to answer the call to serve their country in the late war.

Full amount paid in on Patriotic Fund was \$2,182.00.

Balance in Treasury at this meeting is \$31.10.

By motion this balance was turned over to the General Fund of the Society.

Under the third head, Miscellaneous Reports, you all know that at this time last year and for four months following we were all so worked in our profession that we, each and every one of us would have had to make a great sacrifice to stop at a call of the President for a meeting of our Society. I find that we did not have any meeting in January, had one in February, two in March, one in April, one in May and none in June (holidays July and August). Two regulars in September and one special. Two in October and two in November, so that in the year past we have had twelve meetings, seven since holidays which betokens the greatest activity and earnestness and progressiveness that this Society has ever experienced. Another surprise I want to give you is that the average attendance of these twelve meetings was twenty-three—as good an average and a shade better than the year we had over 100 at one meeting—coming from Saginaw, Flint, Midland, etc.

We have this year dropped one from our roll because of non-payment of dues for at least three years—one for non-payment of dues for at least two years. One, Dr. Orth, has moved out of our jurisdiction without paying 1919. Dr. E. C. Goodwin has been taken care of as to the present but has not applied for transference; Dr. F. W. Brown has been transferred to State of California. Dr. C. V. Crane has received transference to Kent County Medical Society of Grand Rapids. McNaughton in arrears two years has left and I understand is in Detroit. Same history applies to G. McGeock. Moffat Flynn dropped from records because of five years in arrears. New members this year, Dr. G. R. Richards, Maurice C. Miller, H. M. Goud, Dr. Smith Omer, Dr. A. S. McDowell, Turner, Mich., Dr. John Slattery, Dr. J. H. McEwen, Dr. C. F. Roche, Dr. V. W. Bergstrom.

To-day we have sixty members on our roll.

Among things passed upon by this Society in the last year I would freshen your memory by resolution a year ago, "That this Society go on record that this city should engage a Health Officer—a Trained Sanitarian and Public Health Officer at a salary of \$5,000, to enable him to devote his entire time to correctly perform duties necessary at this time. That Dr. Wm. Kerr be urged to use his best efforts to have established

in the New Proposed Carnegie Library a medical section for best medical literature.

Next remember our alliance with the Board of Commerce. If hazy we had better get a new understanding with them. Mercy Hospital has not yet a staff appointed which is necessary for them to be a member of U. S. Hospital Association. They look to Bay County Medical Society for appointment of the staff.

Of the papers presented to this Society during that last year the ones given by Dr. McLurg, Dr. Harryhurst, Dr. F. S. Baird, and Dr. Gale deserve most high praise. The greatest treat for the medical practitioner was the one by Dr. Geo. McKean, "The Present the Opportune Time for the Medical Man." For the tonsil man or specialist, Dr. J. M. Robb was exceptional and Dr. Peterson's talk and illustration best served the surgeon or gynaecologist.

Gentlemen, I want to conclude by saying that the year coming is the one most propitious in the history of Bay County Medical Society, our membership begins with the largest in its history. One of our members is most highly honored by being President of Michigan State Medical Society, and with everything in our favor we each and every one must bend our best efforts to put a star on old Bay County Medical Society for year 1920; and, if we do, we can have the Medical Society meet right here in 1921 with pleasure. I would advise the invitation to be extended and backed and carried to completion to have the State meeting here in 1921.

DETROIT ACADEMY OF MEDICINE.

The Detroit Academy of Medicine met Jan. 27, 1920, in Dr. Rich's office. Dr. Don Griswold gave a talk on Influenza.

Abstract.

We know more about diphtheria than any other contagious disease and less about influenza. The incubation period of influenza is from 18-48 hours. Its onset is sudden with marked prostration.

Influenza and measles are contagious from a few hours before the first symptoms appear while the other contagious diseases are contagious from the time the first symptoms appear.

Influenza is a very hard disease to combat because of

1. Rapidity of spread.
 - a. Hemolytic strept. most easily and rapidly spread.
 - b. Influenza comes next.
 - c. Pfeiffer's Bacillus comes next.
2. Very early contagiousness.

The following organisms are found during the first week of the epidemic:

1. Non-hemolytic Strept.
2. Hemolytic Strept.
3. Pneumococcus.
4. Pfeiffer's Bacillus.

Deaths are highest during the first week of the disease with practically no deaths after the fourth week. Deaths are in inverse ratio to the predominance of the Pfeiffer's Bacilli present.

The Pfeiffer's Bacillus has little or nothing to do with the causation of influenza. At the present the bacteriological cause is not known.

The following pathological changes have been found in the organs of the body

1. Inflammation.
2. Hemorrhage.
3. Pus formation.

In some localities meningitis has followed influenza, due to the lowered resistance of those who are meningitic carriers.

Mastoiditis (due to hemolytic strept.) and appendicitis, peritonitis, and infections in all parts of the body have followed attacks of influenza. The same organisms have been found in the complications as were found in the influenza.

The first recent epidemic of influenza in Detroit occurred in the spring of 1918 and was followed by the fall of 1918 attack. The third outbreak in Detroit began about Jan. 20, 1920.

In the first 1,000 cases reported in Detroit in January, 60 per cent. were men and 30 per cent. were women.

The ages of the patients were as follows:

- 1-10 years—13 per cent.
- 10-20 years—10 per cent.
- 20-30 years—35 per cent.
- 30-40 years—25 per cent.
- 40-50 years—10 per cent.
- 50-60 years— 3 per cent.

Of these 1,000 cases reported:

- 6 per cent. preschool age.
- 8 per cent. school age.
- 32 per cent. persons who stay at home.
- 16 per cent. office and store employees.
- 21 per cent. factory workers.
- 10 per cent. out of door workers.

Degree of illness:

1. Prostrated in bed—28 per cent.
2. Sick but up with clothes on—50 per cent.
3. Dressed but doing light work—27 per cent.
4. Gone out to work—3 per cent.

One attack renders fairly complete immunity for at least six months.

GENESEE COUNTY.

A joint meeting of the Genesee County Medical and Dental Societies was held on Wednesday, January 21, 1920, President Randall in the Chair. Dr. Bion East of Detroit read a paper on "War Injuries of the Face and Jaws." This was illustrated by lantern slides and presented many original ideas on the treatment of Facio-Maxillary work. Dr. J. Chalmers Lyons of Ann Arbor read a paper on "Focal Infections" and covered the subject in a masterly way. His paper showed clearly the need of co-operation between the Medical and Dental professions. Dr. George J. Goering of Flint presented the report of a case of Anencephalic Monstrosity and discussed the Embryological factors involved.

W. H. Marshall, Secretary.

The Genesee County Medical Society met on Wednesday, Feb. 4, 1920. Dr. Noah Bates was appointed Society Historian and directed to prepare a history of the Genesee County Society. Dr. M. W. Clift presented a Hirtz Compass and demonstrated its use in localizing foreign bodies in the tissues. A paper by Dr. W. J. Herrington of Bad Axe on "Intestinal Obstruction" was read by Dr. Reeder, Dr. Herrington having been prevented from attending by reason of illness. Dr. Roy A. McGarry of Flint read a paper on "Lumbar Puncture" dwelling principally on its use in diagnosing diseases of the Nervous System caused by Syphilis.

W. H. Marshall, Secretary.

KALAMAZOO ACADEMY OF MEDICINE. SECRETARY'S ANNUAL REPORT FOR 1919.

Your Secretary respectfully submits the following report:

During the year 1919, seventeen regular meetings have been held.

The Northern Tri-State Medical Society was the guest of the Academy, and a very valuable meeting was held.

The Scientific standard of the meetings during the year has been of exceedingly high grade, as will be shown by the report of the Program Committee.

The luncheons and social functions have been well taken care of by an especially efficient Social Committee.

The Academy has done considerable work along health legislation lines.

During the year nearly all of our members who were in Government service have returned to civil practice and the Academy has felt the influence of their presence with us, which has added

greatly to the value and inspiration of our meetings.

The total membership of the Academy at present is 134.

During the year we have lost two members by removal and one by death.

Six new members have been added to our list, and eleven lapsed members have been reinstated.

Your Secretary recognizes the value of the suggestion by some of our members that during the coming year, while we should not hold fewer scientific meetings, we should have more social functions that the membership may become better acquainted, and a closer spirit of fellowship be developed.

B. A. Shepard, Secretary.

REPORT OF THE PROGRAM COMMITTEE
FOR THE YEAR 1919.

This Committee has provided seventeen programs during the year for the regular meetings of the Academy and part of the program for the Tri-State Society, which replaced one of our regular sessions. The remaining date of the calendar year was given over to the program of the Michigan State Medical Society. The names of the essayists are given elsewhere in this number of the bulletin. The subjects covered and the number of papers on each during the year were as follows:

Internal medicine	7
General surgery	6
Bone surgery including fractures	3
Diagnosis	6
Tuberculosis	2
Social service	2
Gynecology	1
Obstetrics	1
Skin	1
Urology	1
Nervous and mental	2
Roll call with Case Reports	1

It has been the policy of the Committee to have both outside and local talent represented at each meeting in as far as possible. One or more outside guests have given papers at each meeting but one. Local papers have been given on twelve of the seventeen programs. While this is an improvement over last year in the number of local members taking part the Committee feels that this number should be greatly increased in the future, as the quality of medical thinking in and about Kalamazoo is improved fully as much by the writing of papers as it is by listening to those of our guests.

The Committee has endeavored, as far as possible, to have a variety of subjects treated so that all members might get what they were especially interested in. We believe this endeavor has resulted in the bringing to our midst of a veritable post graduate course, the quality of which has merited the closing of the offices of all members on Academy days.

The Committee wishes to express its endorsement and appreciation of the manner in which the Secretary has displayed the programs and later abstracted the papers in the bulletin. We believe this is the successful method whereby all members of the Society can get the greatest amount of good from the scientific programs given.

C. E. Boys, S. R. Light, J. B. Jackson.

ANNUAL REPORT OF CLINICAL PROGRAM COMMITTEE.

During the year two clinical programs were given, as follows:

The first was given by Dr. C. D. Camp, of Ann Arbor, Michigan, on Nervous Diseases, before the Northern Tri-State Medical Society, which was a guest of the Kalamazoo Academy of Medicine, November 5, 1919.

The second was clinical program furnished by Dr. Udo J. Wile, of Ann Arbor, Michigan, on Skin Disease.

A considerable amount of clinical material was furnished for both of these occasions. These clinics were of unusual interest and furnished Post Graduate material which no member could afford to miss.

We wish to express our appreciation to those members of the Academy who co-operated with us in obtaining this material.

C. L. Bliss, Chairman.

REPORT OF THE ANTI-TUBERCULOSIS COMMITTEE.

As the Tuberculosis work has been carried on by the Director of Health and Welfare, the Anti-Tuberculosis Committee has no report to make.

The Academy met with the State Trudeau Society and had a fine program on Tuberculosis.

Walter Den Bleyker, Chairman.

ANNUAL REPORT OF PUBLIC HEALTH COMMITTEE.

To the President and Members of the Kalamazoo Academy of Medicine:

I herewith submit the report of the Committee on Public Health for the year 1919:

The report will deal briefly with some phases of diseases which present public health problems.

At the New Orleans meeting of the American Public Health Association influenza was discussed from many angles. There seemed to be a consensus of opinion on the following points: First, that we are likely to have a recurrence of influenza this winter, but that it will probably not be so severe as that experienced last year; second, there is no reliable vaccine or serum for the prevention or treatment of influenza; third, administrative measures should include isolation of the patient and provide proper medical, hospital and nursing care of those sick with influenza.

The preventative measures to be used by the public are to keep the physical resistance up to the highest point by practicing personal hygiene—cleanliness, which should include frequent washing of the hands, more frequent than is generally the case; proper clothing and as much out-of-doors as is possible; proper heating and ventilation of houses, offices and all places of public assembly—in short, public and personal hygiene. Although we can reasonably hope for a milder type of influenza we must not relax our vigilance.

Attention is called to the epidemic of mild scarlet fever which is now present in Kalamazoo and elsewhere. Many of these cases are so mild that they are not recognized and are found later in the schools with disquimating hands. A few doctors have refused to diagnose scarlet fever unless there is a frank eruption, notwithstanding the presence of a tongue and throat that suggest the disease.

Attention is directed to the statements of Osler, Rosenau and others to the effect that many cases of walking scarlet fever present little further evidence than a passing sore throat. Osler puts the number of these cases at 30 per cent. in school epidemics. These cases doubtless spread the disease, especially in schools.

In the presence of the present epidemic of scarlet fever, therefore, it is necessary to exercise great care in the examination of these cases. In many of the cases the distinctive appearance of the tongue and tonsils is our only guide—the prominent highly injected papillae, the firred coating through which the inflamed and injected papillae project and the red raw tongue after it has desquamated—the “strawberry tongue.” No other form of sore throat is attended with such an appearance of the tongue. In many of these cases the tonsils are greatly inflamed and occasionally covered with grayish patches which may be confused with diphtheritic membrane.

Tuberculosis.

The Academy has co-operated with the tuberculosis committee of the Civic Improvement League in conducting a clinic for the examination of persons suspected of having the disease. The clinic has been operated since February 1, 1919, and is open for examinations every Saturday.

Seventy-nine (79) persons have been examined and eight re-examined. Of these, four have been diagnosed as tuberculosis and four as suspicious. All suspicious cases have received instructions. The nurses have made 493 calls on tubercular cases.

A. H. Rockwell, Chairman.

REPORT OF SOCIAL COMMITTEE, 1919.

There have been fifteen luncheons at the Park-American during the year on the days of the scientific program of the Academy. The Kalamazoo Academy of Medicine entertained the Tri-State Medical Association on November 5th.

The average number of attendance at luncheons has been sixteen. Considering the attendance and the membership of the Academy this is a small average. We realize that it is difficult for a medical man to control his activities particularly when this luncheon must begin at 12:15 p. m., so as to finish in time for the afternoon program. At nearly every luncheon the out-of-town essayists, who have been men of wide reputation, have been entertained. To meet and to know some of these men is an inspiration and to be present to greet them cordially is to fulfill an obligation that every member should cheerfully assume. The Academy should not depend upon the committee alone to entertain our essayists. Some members have been very good to help the committee in the entertainment of guests. This has been greatly appreciated by the committee. We believe that the noon-day luncheon has become an indispensable factor in the development of a congenial spirit in the profession. The committee suggests that a smoker every month or two might further promote the social spirit. The committee sincerely hopes that the medical men of the city will make a continued effort to attend all social functions.

Committee: J. H. Vanness, A. W. Crane, C. B. Fulkerson, Chairman.

SOCIAL HYGIENE COMMITTEE.

As several well organized agencies have been constructively working along the lines of Social Hygiene in the city during the year, your committee has largely confined its activities to co-operation with these national, state and local

movements, including a furtherance of the work in our Public Schools and the formation of a layman's committee from which much good should come.

As formerly, numerous talks have been given by members to your committee.

Leroy H. Harvey, Chairman.

ESTIMATED BUDGET FOR 1920.

State Society dues -----	\$ 420.00
Guests' -----	25.00
Postage and stationery -----	90.00
Bulletin and printing -----	220.00
Library -----	80.00
Telegraph and telephone -----	75.00
Music and flowers -----	25.00
Light -----	10.00
Janitor -----	35.00
Repairs (book cases et. al.) -----	150.00
Sundries -----	20.00

\$1,150.00

W. A. Stone.

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ST. CLAIR COUNTY.

At the last regular meeting of the St. Clair County Medical Society the following officers were elected for the coming year:

President—W. H. Morris.

Vice-President—M. E. Vroman.

Secretary-Treasurer—J. J. Moffett.

An elaborate banquet was held in the Hotel Harrington at which about forty members were present. The work of the Public Health Service was the main subject of discussion. The program for the ensuing year includes many specialists of repute as well as the contributions of the local members themselves.

John J. Moffet, Secretary.

Book Reviews

THE PRACTITIONER'S MANUAL OF VENEREAL DISEASES WITH MODERN METHODS OF DIAGNOSIS AND TREATMENT. A. C. Magian, M.D. Cloth. 215 pp. Price, \$3.00. C. V. Mosby Company.

This manual, the work of a British Officer, sets forth a practical outline of diagnosis and treatment. Other than that it presents nothing new and has no special feature of merit. In some respects it is disappointing and does not come to the standard of American texts. Its illustrations are crude.

THE SYSTEMATIC DEVELOPMENT OF X-RAY PLATES AND FILMS. Lehman Wendell, B.S., D.D.S., Chief of Photographic Work and Instructor of Prosthetics and Arthodontia, University of Minnesota. Cloth, 80 pp. Price, \$2.00. C. V. Mosby Co., St. Louis, Mo.

This is indeed a splendid manual imparting a compilation of dependable procedures that will enable one to perfect a splendid technic. We know of no single volume that gives such a practical system. It appeals at once to every person who is engaged in X-ray work and will be welcomed.

MODERN SURGERY: GENERAL AND OPERATIVE. By J. Chalmers DaCosta, M.D., Samuel D. Gross Professor of Surgery, Jefferson Medical College, Philadelphia, Pa. Eighth Edition, revised, enlarged and reset. Octavo of 1697 pages, with 1177 illustrations, some of them in colors. Philadelphia and London: W. B. Saunders Company, 1919. Cloth, \$8.00 net.

An up-to-date revision of a text to which we have all frequently turned for information and aid. One that has and always will be a part of every progressive surgeon and practitioners library and put to frequent use.

What we have said of former editions still applies—only this edition brings it up to our present viewpoint. May we have more texts like this.

MEDICAL ASPECTS OF MUSTARD GAS POISONING. By Alfred Scott Warthin, Ph.D., M.D. and Carl Vernon Weller, M.S., MD., both of the Department of Pathology, University of Michigan. Cloth, 156 illustrations, 267 pp. C. V. Mosby Co., St. Louis. Price, \$7.00.

There is here given the results of the author's independent research and also while engaged in a similar line of work for Chemical War Service Board.

As such it is a full discussion of the work performed and the results that supplied a basis for tenable conclusions. These conclusions are of extreme value to those who are called upon to treat the ex-soldier who has been exposed to mustard gas.

We have also a discussion of a splendid, patriotic and scientific research work that these men have accomplished.

ANAPHYLAXIS AND ANTI ANAPHYLAXIS AND THEIR EXPERIMENTAL FOUNDATIONS. By A. Besredka, Professor at the Pasteur Institute. Price, \$2.25. C. V. Mosby Company, St. Louis.

A clear exposition of the subject that is of importance in this day of increasing sero-therapy. Further comment is not called for.

THE AFTER-TREATMENT OF SURGICAL PATIENTS. Willard Bartlett, A.M., M.D., F.A.C.S. and Collaborators. Two volumes. Cloth. Price \$10.00. C. V. Mosby Co., St. Louis.

The first complete discussion and presentation of the entire subject of after treatment of a surgical patient that has come to our attention. The outcome of a patient is never solely dependent upon the operative attack alone. The result of an operation is very much dependent upon the post operative care. Many surgeons neglect this part of their work or delegate it to assistants. No one has ever covered the subject as completely as this author has done and imparted so many practical methods.

Here the young surgeon will find at his immediate disposal all that years of experience has taught the older men. To these the work will be of untold value. To those of advanced experience there is in store much that they may well utilize.

We predict a hearty reception for these two volumes wherein one obtains a wealth of practical procedures.

SYPHILIS—A TREATISE ON ETIOLOGY, PATHOLOGY, DIAGNOSIS, PROGNOSIS, PROPHYLAXIS AND TREATMENT. Henry H. Hazen, A.B., M.D., Professor of Dermatology and Syphilology, Georgetown University. Cloth, 630 pp., 160 illustrations. Price, \$6.00. C. V. Mosby Company, St. Louis, Mo.

This is a most exhaustive review of the subject based upon the author's extensive experience and special chapters by experienced syphilologists. The work conforms to its title in every detail and covers the disease in every feature. As such it then becomes a valuable contribution imparting the entire present day attitude of the profession.

Careful study and reading of this book enables one to acquire a modern conception of the various ramifications of the disease and to institute proper treatment.

The work is commended most heartily.

Miscellany

GUNSHOT FRACTURES OF THE HUMERUS TREATED BY SUSPENSION AND TRACTION.

By Morris K. Smith, M.D., of N. Y. Late Capt. M.C., U. S. A. *Annals of Surgery*, Vol. LXX, October, 1919, No. 4.

The arm is supported in a sling from an overhead pulley. The forearm is suspended by glued bands in the same manner, but with attachment

further away from the body as its center is in a plain outside that of the arm, when the member is abducted. Traction is obtained by bands glued to the arm, the wound permitting, more often by a band encircling the arm just above the elbow, and attached by a pulley to the frame, or an abduction board placed under the mattress. In this way it is always possible to maintain the fragments in alignment by altering the angle of abduction and varying the relative suspension weights on the arm and forearm. In the few cases where abduction and traction alone do not correct a lateral deformity, lateral traction in opposite directions on the two fragments can easily be added.

The advantages of suspension and traction are:

1. Maintenance of favorable position from the point of view of circulation and drainage.
2. Ease and simplicity of dressings.
3. Comfort of patient.
4. Control and maintenance of reduction.
5. Earlier restoration of function.

While in the apparatus patients are taught to exercise both elbow and shoulder before union has begun. The wrist and hand are always freely movable. Massage is carried out from the start. The patients are kept suspended until union is sufficiently firm to allow them up without support. Once up, the ordinary case should not even be allowed a sling, so that complete mobilization of joints may be carried out as rapidly as possible.

Primary and Secondary Suture of Wounds.—The immediate or early conversion of a compound into a simple fracture represents an ideal, the attainment of which would mean tremendous curtailment of infection. One should be very conservative about attempting these procedures.

Resected shoulder cases should be maintained in wide abduction, so that, if union takes place between the end of the humerus and the scapula, abduction by means of the shoulder may be possible.

Where a good anatomical result is not obtained by the method of suspension and traction, it must usually be blamed on the surgeon, not the method. The position of the fragments can be controlled with accuracy. Until union has taken place, this position requires repeated checking, clinically and radiographically. This constant watchfulness is a point which an inexperienced surgeon is likely to forget.

Operative interferences (ordinarily sequestrectomies) were the cause of four refractures, and falls twice. Union usually takes place very rapidly in these cases, because callus is already present.

To summarize, suspension and traction in treatment of gunshot fractures of the humerus offers the following advantages: Favorable posture for treatment of wound; maintenance of reduction for any type of fracture; and early recovery of function. As in the treatment of fractures by any method, experience and painstaking supervision on the part of the surgeon is necessary to secure the best results. In a fracture ward, specially trained nurses should be employed. The more experienced one becomes in the use of suspension and traction in the treatment of fractures the more its possibilities challenge interest and effort, and the better will be the results obtained.

Leo C. Donnelly, Detroit.

ANALYSIS OF BLOOD OF INSANE PATIENTS.

Summary:

The blood of epileptic, dementia praecox and manic-depressive patients shows no deviation from the normal content of total nitrogen, non-protein nitrogen, uric acid, urea, creatinin, creatin, glucose, chlorin, or calcium. (Arch. of Neurol. & Psych., Feb., 1920, Paul G. Weston.)

A CASE OF MENINGO-ENCEPHALLITIS (LETHARGIC ENCEPHALITIS).

Summary:

From the clinical standpoint our case was one of meningo-encephalitis with lethargy and involvement of the motor fibers of the third, sixth, seventh, tenth and twelfth cranial nerves.

The etiologic cause was a gram-negative motile bacillus, unidentified, but probably belonging to some intermediate class of the colon-typhoid-enteriditis group.

Pathologically, the lesion demonstrated septic meningo-encephalitis and ependymitis, with punctate hemorrhages and perivascular cell infiltration of the centrum ovale, corpus striatum, and optic thalamus. (Arch. of Neurol. & Psych., Feb., 1920, W. W. Hala and C. M. Smith.)

FACTS ABOUT CANCER.

Cancer is unquestionably increasing throughout the world.

At the beginning cancer is usually painless and difficult to detect.

At its first small growth it can be safely and easily removed by a competent surgeon.

Cancer is not a constitutional, or "blood" disease.

Cancer is not contagious.

Cancer is, practically speaking, not hereditary.

Every lump in the breast should be examined by a competent doctor.

Persistent abnormal discharge or bleeding is suspicious.

Sores, cracks, lacerations, lumps, and ulcers which do not heal, and warts, moles, or birthmarks which change in size, color, or appearance, may turn into cancer unless treated and cured.

Probably 60 per cent. of cancers of the rectum are first regarded as piles. Insist on a thorough medical examination.

Continued irritation in some form is the usual cause of cancer. It rarely results from a sudden injury.

A doctor who treats a suspicious symptom without making a thorough examination does not know his business.

CANCER IS INCREASING.

Cancer, probably the most dreaded of all diseases, is on the increase in America and throughout the world in spite of the fact that it is curable if treated early, says the United States Public Health Service. In its death toll in the United States cancer already ranks among tuberculosis, pneumonia, heart disease and diseases of the kidney, and it is much more feared than any of these. This is because of the ignorance of the public, the difficulty of detecting a cancer in its early stages and the fact that when it has reached the recognizable stage it has gone beyond the curable stage.

The medical world today believes that work for the control of cancer should be largely similar to that so successfully carried on in tuberculosis; that is, it should consist mainly in widespread education of the general public to recognize cancer in its precancerous state, it should

train the people at the first alarm to seek the advice of a competent physician, and it should keep the public freely advised of the latest scientific knowledge concerning cancer, its causes, prevention and cure.

The first and most important requirement in such a campaign of education is that the public change its viewpoint. The United States Census Bureau for 1917 gave a total of 61,452 deaths from cancer as compared with 112,821 from pneumonia, 110,285 from tuberculosis, 115,337 from heart disease and 80,912 from kidney diseases. So it will be readily seen that cancer already ranks among the leading causes of death in this country.

Cancer is apparently increasing. The recorded death rate shows about two and one-half per cent. more cases every year. It has risen from 62.9 deaths per 100,000 of population in 1900 to 81.6 in 1917. Some of this increase is unquestionably due to an improvement in recording and gathering vital statistics and to better diagnosis, but it is generally believed that these factors do not alone account for the increase.

Cancer, if discovered early and treated immediately by a competent physician and surgeon, is now regarded as a curable disease. Unfortunately the early discovery is difficult. Unlike almost any other disease its first attack is usually painless, and often, therefore, before the disease is discovered it has reached the stage where a major operation is necessary and the chances of cure have been greatly reduced, if not entirely lost. Another unfortunate circumstance is that in many cases when a person realizes he has cancer he fails to seek the best medical treatment. Advertising quacks and patent medicines, claiming phenomenal cures, loom up like a last ray of hope to the afflicted. As a matter of fact their treatment invariably aggravates instead of helping and when competent physicians are finally consulted the case is really beyond any hope of recovery, or arrest.

The belief that cancer is contagious has caused untold suffering and occasionally cruel neglect of the unfortunate sufferers. So far as it has been possible for scientists to learn there is no germ capable of causing cancer in human beings or animals. In communities where the cancer prevalence is higher than in others it has invariably been traced to the fact that most of the young

people had left the community. Since cancer is a disease of middle age the higher rate was to be expected. There is no case on record in which either an operating surgeon, or nurse, has contracted cancer from coming into contact with it, even after years of work exclusively in this field.

Another popular myth that seems to be pretty well exploded is that cancer is hereditary. No argument could be more convincing than the way life insurance companies look at this aspect of the disease from a business point of view. In deciding whether a person is a "good risk" these companies disregard evidence that cancer occurred in one or both parents, or in other ancestors. Their carefully-kept statistics covering many years prove that the person to be insured will not necessarily contract the disease. Indeed the insurance companies say there is no cause for apprehension even if both parents died of cancer. The most that could be fairly argued is that people whose families seem particularly susceptible to cancer should well inform themselves with regard to early symptoms and be on the alert for the first danger signal.

The tissues of the body, the muscles, the glands, the bones, are each composed of a very large number of very tiny cells, which may be compared to the brick in a building, and they are held together by a material which may be compared to the mortar. However, the body cells are alive, constantly growing and dying off, according to certain laws which we do not completely understand. Sometimes these cells begin to grow and develop along lines which are not in harmony with the usual order. A little group of the cells forms a lawless colony, which constitutes an unhealthy, growing spot in the body. This may occur on the skin, in the breast, stomach, throat, or in any part of the body. Frequently they form a little hard lump which can easily be detected by touching it and which can very easily be removed by the physician. If this mass is not removed at once it usually continues to grow and to branch off into the surrounding tissues. This penetration marks the difference, the fatal line between the benign or harmless growths like warts, and malignant growths or cancers. Finally a large mass is formed and

minute portions become detached and are carried to other parts of the body. When ordinary cells become detached and get out of place they usually die. Cancer cells, on the other hand, have such power of survival they continue to grow wherever they are deposited and new cancers are the result.

Cancer often arises after continued, long irritation of various kinds and in and about benign growths, or ulcerations. Cancer of the lip and mouth has been known to come from burns, from pipe stems, from constant irritation from bad teeth and among East Indian races from chewing the betel nut. Cancer of the external abdomen in the natives of Kashmir, never observed among other races, arises from burns from kangri baskets of live coals which these mountaineers wear as a kind of warming pan. Cancer of the oesophagus is observed in the Chinamen who eat their rice too hot, while it is absent in the women who eat their rice cold at a "second table."

Women, unfortunately, are most susceptible to cancer. Between the ages of 35 and 43 three times as many women as men die of cancer, and between 45 and 50 twice as many die. They should, therefore, be especially educated to recognize the first signs of a benign growth and consult a physician at once. Persistent ulcerations, cracks and sores, warts, moles, or birthmarks which change in appearance, or grow larger, should be removed. All forms of chronic irritation should be prevented.

While no one in particular can be said to be susceptible to cancer it can truthfully be said that so far as is known no one is immune to it and statistics leave no room to doubt it is on the increase. The time has come when the general public should be educated as thoroughly as in the nation-wide campaign for the control of tuberculosis.

To aid in this work the United States Public Health Service has carefully prepared a neat, pocket-sized booklet, "Cancer, Facts Which Every Adult Should Know," written in lay terms. This book will be forwarded on application to the Public Health Service, Washington.

A House of Service

2—Investigation of Therapeutic Agents

THIS house was only seven years old when a definite plan of pharmaceutical investigation was inaugurated. That was in 1874. The vegetable materia medica was then attracting the attention of the medical world. Little systematic work, however, had been done to develop this new field or its possibilities.

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Subsequently the reports were collected, classified and published in a series of "Working Bulletins"

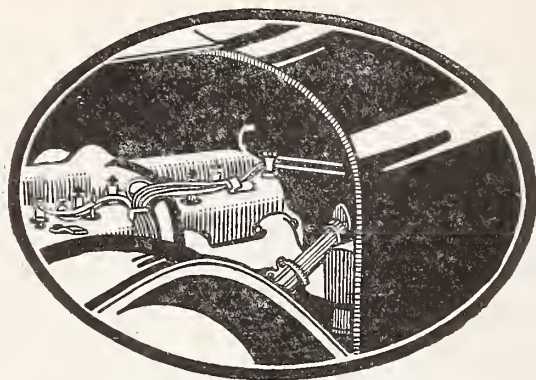
as a definite contribution to medical science. Information was in this way properly correlated—information from medical practitioners, from hospital attachés, from scientific experts engaged in more extended research in pharmacology, chemistry and pharmacy.

As a result of this work, Parke, Davis & Company introduced many valuable medicinal agents that are now recognized by the United States Pharmacopœia and the National Formulary.

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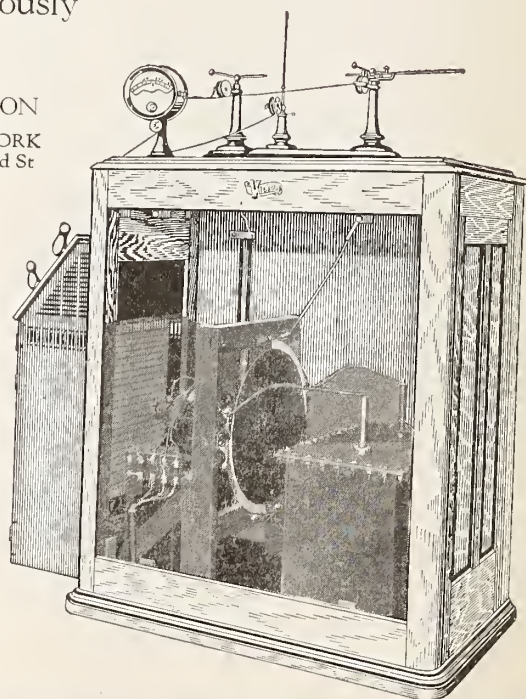
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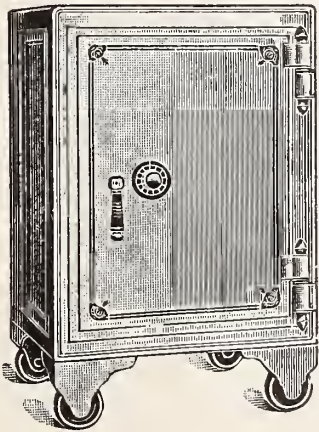
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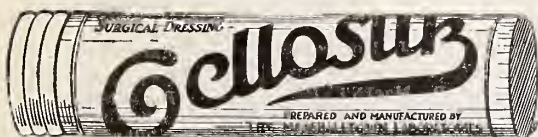
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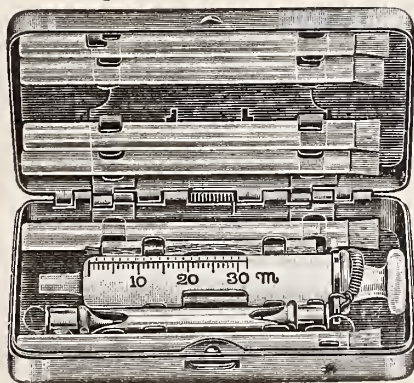
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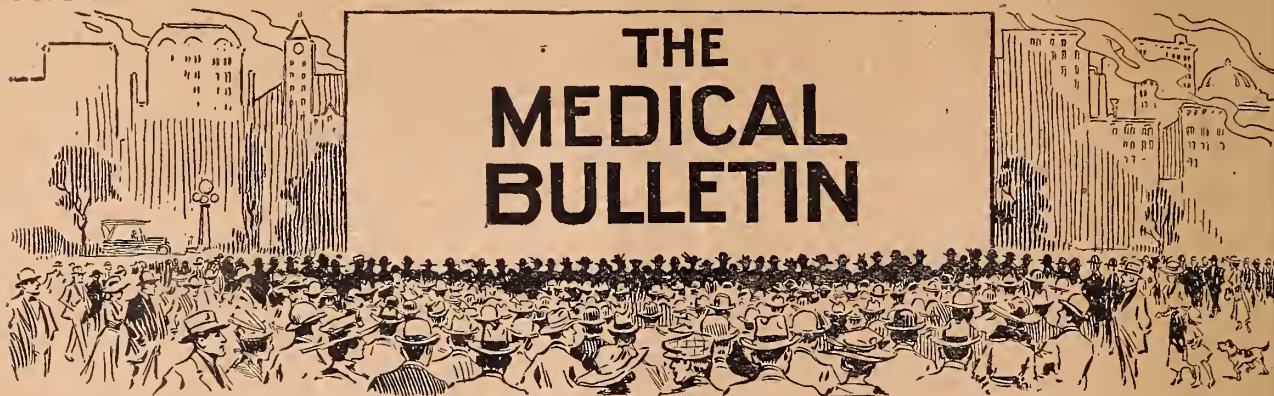
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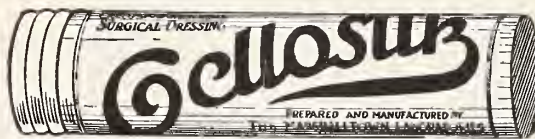
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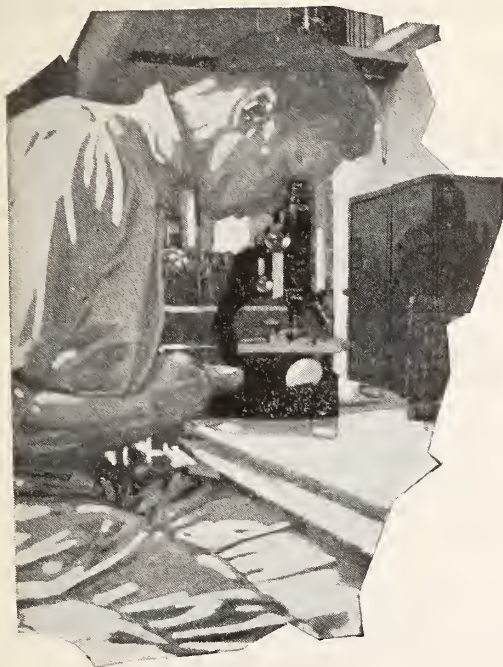


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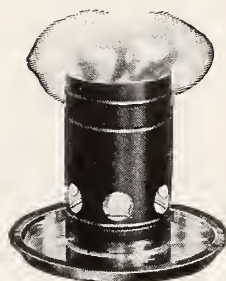
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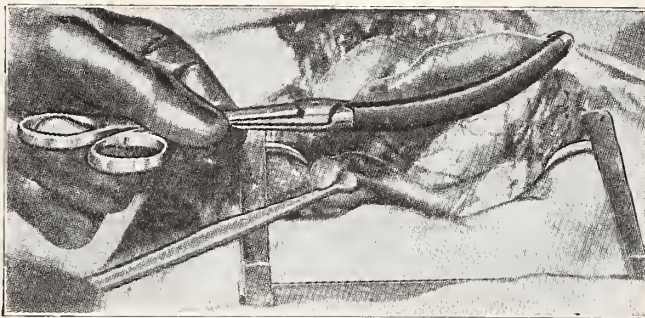
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Vol. XIX

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No. 4

Original Articles

A NEW AID IN THE EARLY RECOGNITION OF POST-OPERATIVE ILEUS.

JAMES T. CASE, M.D., F.A.C.S.
Surgeon, Battle Creek Sanitarium.
BATTLE CREEK, MICH.

Often the most experienced surgeons feel considerable uncertainty as to the nature of an acute abdominal lesion when characterized by apparent obstruction of the bowel. The patient's chances of recovery depend very largely upon the early recognition of the lesion present. If one delays long enough, following an abdominal operation, the occurrence of inhibition of bowel activity, accompanied by progressive abdominal distention, beginning within twenty-four hours, unrelieved by ordinary remedies, continuing in a more obstinate and progressing manner, during the second, third and fourth days, with rapid pulse, increase in temperature and rate of respiration, restlessness, cold perspiration, vomiting of dark material, sometimes of fetid odor, but without the passage of gas or fecal matter from the bowel, with finally tense distention of the abdomen, leaves no doubt as to the presence of acute post-operative ileus. Even the passage of gas and fairly satisfactory bowel movements does not exclude an obstruction which may have occurred high up in the small bowel. This obstruction may be a parietic condition due to adynamic causes as for instance infection, or it may result from mechanical conditions. Small intestine obstruction not often supervenes as the result of adhesions unless the adherent small intestine is thereby fixed to some immovable organ or part.

In the treatment of mechanical obstruction of the bowel following laparotomy, early recognition of the condition is of the greatest import in order that the profound general depression attending the later stages of the obstruction may be minimized. Naturally every surgeon regards with suspicion any untoward post-operative symptoms, at least one of which oc-

curs in a greater or less degree in the majority of abdominal cases. The occurrence of distention, particularly in the epigastric region, accompanied by vomiting or frequent gagging, or gulping of small quantities of dark fluid, or any one of a number of other symptoms belonging to the category above listed, becomes immediately a cause of disquietude. If twenty-four hours can be saved in reaching a decision in a case requiring further operation, great help has been rendered the patient.

While recognizing the comparative certainty with which intestinal obstruction can be diagnosed, the desirability of making the earliest possible diagnosis impels the writer to again call attention to his experience in the employment of the X-ray as a diagnostic adjunct in these cases. In 1910, we began the employment of the X-ray examination with our present technic in cases of ileus, especially in deciding on the advisability of post-operative surgical interference. In 1915, before the Section on Surgery, General and Abdominal, of the American Medical Association, the writer urged this method of roentgen study for all suspected post-operative cases with special reference to determining the existence or non-existence of an obstruction, the degree of the hindrance, the location, and perhaps the nature of the lesion. Furthermore, we were able to determine whether or not the obstruction was progressive. Continued experience in the employment of this means of diagnosis confirms our confidence in its value.

Counting the day of operation as the first day, given a patient on the third day after operation, presenting symptoms suggestive of acute intestinal obstruction, he should be transferred to a carrier, conveyed to the roentgen ray department, a fourteen by seventeen inch plate with intensifying screen placed under him without removing him from the carrier, and a quick exposure made. The exposure is not necessarily instantaneous; it must only be short enough so that the patient can hold his breath. With intensifying screen, the exposure need not be longer than five or even ten seconds, and with

powerful apparatus it may be reduced to a fraction of one second. Even if bedside apparatus is used, the improved types now available for bedside purposes, will permit exposures within the ten-second limit. The plate is then removed and the patient returned to his room and bed without further manipulation or inconvenience than is required to lift him onto the stretcher and back again. Indeed, with the type of bedside apparatus which the present war has de-

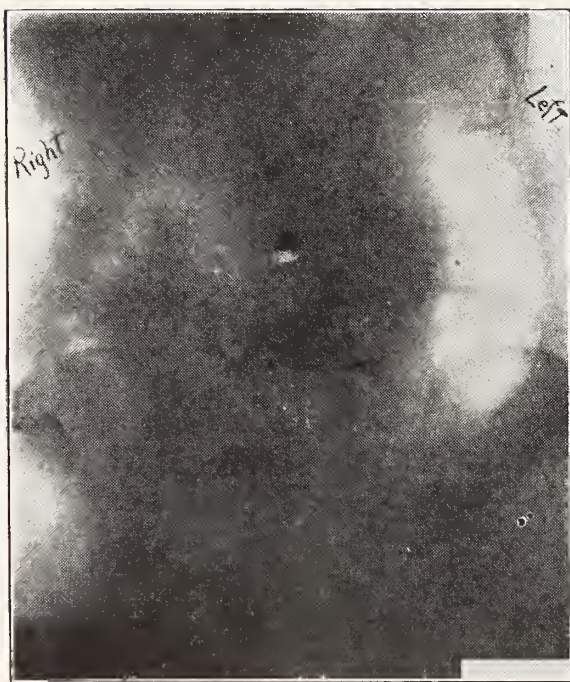


Figure 1. Acute colonic obstruction. (Carcinoma of the sigmoid.) Note gas distention of the colon which by its outline is characteristic of colon, rather than small intestine.

veloped, there is no reason why the entire examination cannot be conducted in the patient's room without more inconvenience to him than the slight manipulation necessary to place the plate holder. No preparation of any kind is required; dressings need not be removed. The plate is then developed and the findings noted as soon as it is taken from the fixing bath. Not more than fifteen or twenty minutes need be consumed in the entire process.

The developed roentgenogram will reveal at once whether there is any gas distention of the bowel, and if so, whether the distention occurs in the small or in the large intestine. Enormous gas distention of the stomach is occasionally seen, and the absence of a gas accumulation in the stomach at once rules out acute post-operative dilatation of the stomach. Small and large bowel may be distinguished by the characteristic outlines of the gas areas. In acute colonic obstruction, the haustral markings as well as the peripheral dis-

tribution of the gas along the course of the colon are sufficiently characteristic to identify the large bowel (Fig. 1). Equally characteristic is the appearance of the gas-distended coils in acute obstruction of the small bowel; the coils are more or less parallel and the caliber of the small intestine is increased to $1\frac{1}{2}$ or 2, and sometimes 3 inches (Figs. 2-6). It is seen that the distention is not confined to a short segment of the intestine but involves one or more feet of the small bowel, usually many feet. A certain amount of postoperative distention of the small bowel is frequently noted where there are no symptoms suggestive of obstruction, but in the serious cases the degree of distention is at once apparent and suggestive. The serrated contour of the bowel is characteristically different from the contour of the colon due to the markings of the haustra coli; so that we are at once able to recognize and differentiate acute postoperative gastric dilatation and obstruction in the large or small intestine.

Observation of the cecal region is especially



Figure 2. Acute post-operative ileus, plate made immediately after the administration of one ounce of barium stirred in water. (a) Stomach. (b) Numerous coils of gas distended intestine, characteristic of acute intestinal obstruction. Nevertheless, operation not yet decided upon. See Fig. 3. Gas distended ileum differentiated from colon (c) by feathery outline. Colon characterized by haustral markings.

helpful, for if the cecum contains gas, it is not likely that the obstruction is in the small bowel. The case illustrated in Figure 6 is very instructive on this point. Most of the gas is contained in the cecum, yet the coils of distended small intestine occupying the left side of the abdomen are clearly seen. Redoubled efforts to get the

bowels to move were successful in this case and the patient made an uneventful recovery without further operative interference. If there had not been present marked distention of the cecum, operation would have been urged. If the gas collections, as above described, are seen to occupy the middle of the abdominal shadow while the flanks are gas-free, it is probable that the obstruction is in the lower ileum, though not so low as the ileocecal region. When the gas areas occupy the true pelvis and the middle of the abdominal shadow, one may suspect the ileocecal region. Intussusception may be discovered by colonic injection with an opaque material. Early physical findings in these cases are very difficult to demonstrate with surety, whereas the roentgenologic findings may be demonstrated much earlier, and gain in surety as the gas distention progresses.

If the observation of the gas-filled bowel (without the ingestion of barium) does not make clear the location of the obstruction (Fig. 2), time will be saved by proceeding at once to the

take (Fig. 3). These cases are often also so doubtful from the clinical standpoint that final decision as to operation is postponed in any case, and there is ample time for some of the barium to pass on into the small intestine (Fig. 3). After a little experience, however, it is quite unnecessary to administer any barium at all by mouth, the decision being rendered on the appearance of the abdominal shadow with reference to the character and distribution of the gas areas which it may present.

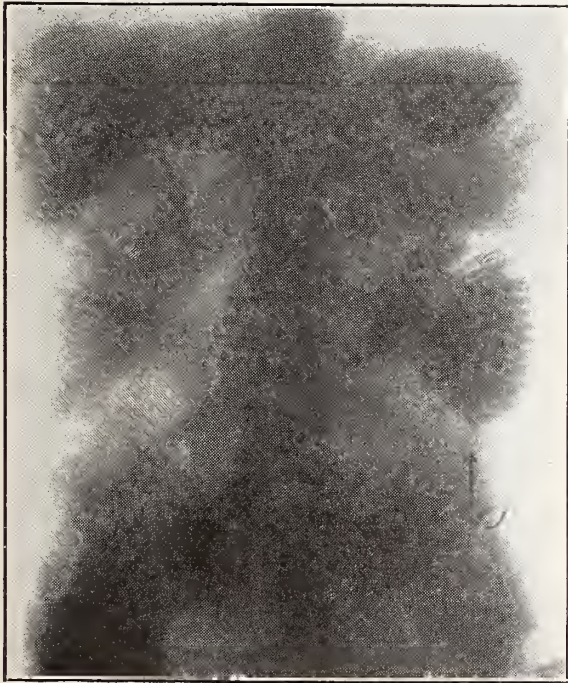


Figure 3. Same case as shown in Fig. 2, six hours later. (a) distended coil of jejunum more clearly shown up by barium. Enterostomy. Cure.

administration of the barium enema to rule out colonic obstruction. If the entire colon fills, it is then recognized that the obstruction must exist in the small bowel. If the findings thus far are still indecisive, and the clinical symptoms are not yet clear, with the permission of the surgeon a small amount of barium sulphate, say half an ounce, may be administered by mouth in any medium which the patient will

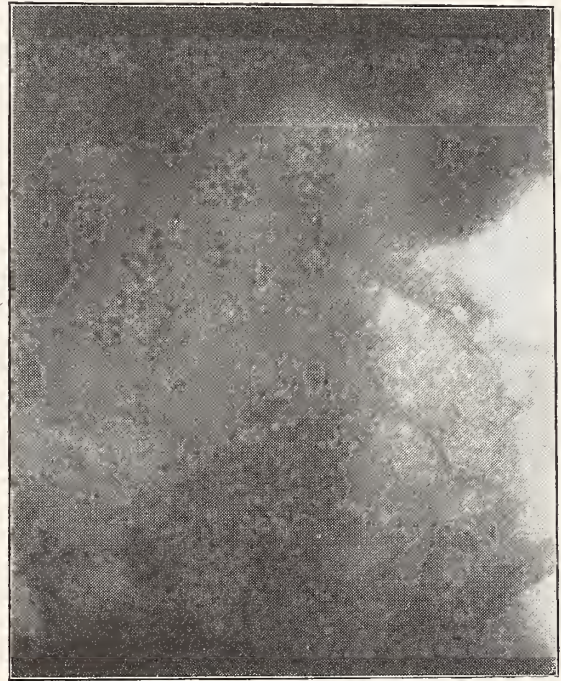


Figure 4. Very high grade of acute obstruction near ileocolic junction. Extreme dilatation of small bowel. Enterostomy. Cure.

If non-surgical treatment seems preferable at first, the progress of the case under treatment may be watched by means of the X-ray. Emphasis should be laid on the fact that it is not necessary to administer any barium or other opaque meal in pursuing these studies, for in the great majority of cases, the observations are made possible by the gas distention of the intestine. There is therefore no delay incurred; and no objection can be raised to the X-ray study of these patients on account of possible danger through delay or through the introduction of new food material into the digestive tube in the presence of possible obstruction.

It must be admitted that the employment of the above technic without the use of barium sulphate does not routinely give satisfactory data unless the case is immediately post-operative. We presume this is due to the fact that in the post-operative cases, the bowel is practically empty, whereas in the other classes of

acute intestinal obstruction, the bowel is often loaded with fecal material. Nevertheless, when used in conjunction with an opaque meal the X-ray method gives decisive information in any class of intestinal obstruction.

If the first plate made by the technic described earlier in this paper, does not give decisive information and the surgeon feels that the operative indication is not clear, the policy of watchful waiting may be pursued, and a second roentgenogram made after an interval of eight or twelve hours. The writer sees no objection at all to the administration of an ounce of barium sulphate stirred in water, immediately after the conclusion is reached that the clinical data aided by the first roentgenogram, is indecisive. When this is given, one is often astonished to find that at the second examination considerable barium has reached the small intestine just proximal to the site of obstruction (a, Fig. 3); in such cases the barium adds a certain value to the examination. This course has been followed in a number of cases with nothing but beneficial effects so far as we have been able to observe.

Since the adoption of the general practice of avoiding purgation in the pre-operative treat-



Figure 5. Acute small intestine obstruction, upper abdomen, attending gangrene of cecum in case of carcinoma of sigmoid: (a) gas distended stomach. (b) three parallel reaches of enormously distended small bowel crossing upper abdomen. Death, in spite of operation.

ment of our surgical cases, the number of acute post-operative intestinal obstructions has been greatly reduced and material for the study of the subject of this paper is now only occasion-

ally encountered. The observations, upon which the value of the above technic has been estimated, were made during nine years upon twen-



Figure 6. Acute small intestine obstruction, low in bowel. Considerable distention of the cecum and ascending colon, marked distention of parallel coils of small bowel. Recovery after non-surgical treatment.

ty-nine patients operated in Battle Creek by the surgeons of the Battle Creek Sanitarium and in Chicago by members of the staff of the St. Luke's Hospital.

SHOCK, HEMORRHAGE AND BLOOD TRANSFUSION.*

R. C. LOCKWOOD, M.D.

DETROIT, MICH.

The condition called shock has always been one of the greatest anxieties the operating surgeon and consulting internist has had to face. It is of great interest to all branches of medicine and does not alone concern the surgeon. The condition itself is essentially a medical one, one of pathological physiology and progress in its study has been made by physiological methods. The recent war stimulated an immense amount of work both experimental and clinical and has, I believe, brought out the fact that the condition called surgical shock, wound shock, traumatic shock, secondary shock, etc., is not primarily an entity, but a clinical picture that may be due to a variety of causes working singly or in combination. This is probably the

*Read at general meeting, Wayne County Medical Society.

cause of the contradictory conclusions arrived at by some of the various investigators.

The clinical picture of shock is a general bodily state and is characterized by persistent low blood pressure, rapid pulse, superficial rapid respiration, pallor and sweating.

There is a primary shock which may come on so soon after injury as to be accounted for only as a result of nervous action allied to fainting. This may be transient or if other factors such as hemorrhage, toxemia, exposure to cold, etc., come into play the condition may become true or secondary shock, in fact Cowell who had an extensive experience with the British on the Western Front goes so far as to state that it is doubtful if well established signs and symptoms of shock ever occur apart from hemorrhage. I have seen about five hundred (500) cases in shock and in only a very few was it impossible to secure a history of some bleeding.

It has been shown by Mann (2) that under deep ether anesthesia a point may be reached where the respiratory center will respond to inhibitory reflexes, but not to the normal CO₂ stimulation. Under these conditions he suggests that cases of sudden death during operations on the neck, axillae or diaphragm, may be due to this cause. Regarding reflex inhibition of the heart he states that he could produce death by the stimulation of only one nerve, the superior laryngeal and that during deep anesthesia this disappears.

I believe that most patients who go into shock do so gradually and do not pass through the primary form.

It is well to here consider some of the previous theories of shock.

1. The Nerve Exhaustion Theory. This view has been advanced by Crile and others. In extensive investigations the concept was developed that shock consists of exhaustion of cells in the brain, liver and adrenals, and that impairment of the vaso-motor mechanism is the vital cause. The evidence of this is mainly histologic and is based on examination of nerve cells from shocked animals. Other observers state that the changes are within the limits of normal variations (3). Dolly states that hemorrhage produces the same alterations in nerve cells as are seen in shock.

Forbes and Miller (4), by the use of the string galvanometer found that anesthesia blocks the passage of impulses to the brain, so it is improbable that changes are produced by afferent impulses. Porter (5), Selig and Lyon (6), and Mann (7), found that pressor and depressor vasomotor reflexes still occur even when an animal is in extreme shock, show-

ing that some tonic activity of the vasomotor center is still present and capable of increased action when stimulated.

Many other investigators (3) have shown that in shock the vasomotor is still holding the vessels in effective contraction, and that it is more capable of withstanding the effects of anemia than the respiratory, swallowing, or cardio-inhibitory center. It is only after continuous adverse influences have brought to exhaustion organs of vital importance that death occurs.

2. The role of the heart in shock. The heart muscle in shock shows no defect primarily but after prolonged low B. P. and toxemia its efficiency may be impaired. The rate is fast but is what is to be expected considering the relation which prevails between B. P. and heart rate.

3. The theory of CO₂ starvation. This formerly received much attention and re-breathing expired air was advocated. We now know that the low CO₂ content of the blood is due to the acidosis, and that re-breathing merely increases this acidosis. Furthermore breathing excessive enough to produce a low CO₂ blood content is absent in shock. Marshall, an experienced British anesthetist, and others declare that anything in the nature of asphyxia is to be avoided in shock or hemorrhage patients. This has also been our own observation.

4. The theory of adrenal exhaustion. This was advanced because of the fact that removal or disease of the glands lowered B. P. and injection of the extract of the glands raised the B. P. However, Mann (8) has reported that total removal of both glands does not produce the phenomena of shock. It has also been shown (9) that the epinephrin and also sugar content of the blood is increased in shock and those suffering from painful stimuli.

4. The view that one in shock bleeds into his own abdominal veins. This is a view that has been widely held but is not seen in natural shock. Surgeons of extensive experience during the past war state that they have not found any primary splanchnic congestion on opening the abdomen of shocked cases (10). There is also no venous congestion in other regions observed.

The Lost Blood in Shock.—We know that the heart is capable of doing its work and that the vasomotor mechanism is in efficient contraction, so it is plain that the low B. P. must be due to a diminished volume of blood in active circulation. It isn't in the arteries or in the veins because both arterial and venous pressure are low, so Cannon sought for it in the

capillaries and our present conception of shock is largely due to his work.

Cannon, Fraser, John and Hooper (11) found that there is a stagnation of blood corpuscles in the capillaries, the rbc. count often being as high as 8 mil. against 5-6 mil. as found in the veins at the same time. This has been confirmed by others. The question then is, is the capillary bed sufficiently large to contain the lost blood.

Mann (12) has recently shown that a condition producing stasis in a large capillary bed such as the four extremities will produce the signs of shock.

Calculation of the cross section and length of the capillaries, experiments to show their distensibility, and the formation of new ones warrants Prof. Cannon to the conclusion that their capacity is sufficient to contain the lost blood in shock.

It is well now to consider the cause and effect of this capillary stagnation.

The Effect of Cold.—There is a greater incidence of shock in cold weather, especially when rainy and the clothes are wet or damp.

Observation shows that one of the striking reactions to injury is sweating. This combined with evaporation is the most effective mode of reducing temperature, and as shivering is rarely seen the heat loss is not compensated for by heat production. The shocked individual usually has a temperature several degrees below normal and his skin and extremities are cold, often extremely so.

As an injured man, or one with hemorrhage becomes chilled his B. P. falls and as he is warmed it may rise again.

Denning and Watson (13) found that the viscosity of blood was increased 3 per cent. with a fall of 1°C, and Hough and Ballantyne (14), have reported a rise of capillary pressure in cooled parts of the body, together with lessened conspicuousness of the veins.

It seems probable that cold is one of the most potent factors in shock, leading to a slowing of the blood flow and decreased oxidation which in turn leads to further cooling and increased viscosity.

The Effect of Acidosis.—Normally there is maintained in the body a certain amount of alkali known as the alkali reserve or buffer salts. Carbon dioxide being a weak acid unites with this and is carried to the lungs and eliminated. Thus a stable blood reaction is maintained. Cold, previous starvation and fatigue, capillary stagnation and a slow circulation all co-operate to check the normal oxidative pro-

cesses in the body and to increase the intermediary acid metabolites, which are normally burned and eliminated. These nonvolatile acids being stronger than CO₂ unite with the reserve alkali and produce a condition known as acidosis or diminished alkali reserve.

There is evidence (3) to show that in sufficient concentration these nonvolatile acids, and also CO₂ dilate capillaries, relax cardiac musculature, increase the viscosity of the blood and increase the size of the corpuscles, all tending to promote capillary stasis. These bodies also have another action, they stimulate the vasomotor center which would tend to neutralize their local effect, yet their concentration is probably much greater in the tissues where they are formed.

Dilute acid has been infused into animals and fails to produce shock (15), it has also been infused into animals already in shock and it does not seem to increase the condition.

In view of these experiments it would seem that the acidosis in shock is only an accompaniment of and has little to do with its production or agumentation.

Toxemia.—Here also may be considered the effects of other metabolites coming from injured tissue or toxins of bacterial invasion.

The injection of watery extracts of tissues will cause a fall in B. P.

Dale (16) and his co-workers found that certain doses of histamine, a substance present in the mucosa of the small intestine, when injected into animals gave a profound drop in B. P. with a capillary stasis and subsequent concentration of the circulating blood. Smaller doses produce a vaso dilatation for which evidence is produced to show that it is capillary in origin.

Cannon has shown that by first clamping the blood vessels in the leg of a cat and then crushing the muscles that no fall of B. P. takes place, but on releasing the clamps and restoring the blood flow the pressure promptly falls. On again clamping the vessels and stopping the blood flow there was a progressive rise in B. P. This effect occurs even though the nerves to the legs are severed; it is therefore not of nervous origin. These experiments show that there is a toxic substance set free in injured tissue which lowers B. P. and that it is fairly promptly changed so that the effects are not permanent.

I have often noticed how promptly a man goes bad on releasing a tourniquet from an injured limb and that he improved on again tightening it.

Many French surgeons believe that shock is due to the absorption of proteolytic products arising from the region of injury.

Cannon (17) says "There is a possibility that this traumatic toxemia may be closely related to peptone shock, and that the toxic agent is, like peptone, capable of making the capillary wall more permeable to the fluid portions of the blood.

In certain cases bacteria may be the cause by producing substances in injured tissue which start the sequence of events. In favor of this is the striking change for the better which often follows excision of tissue infected by anaerobic bacilli.

FAT EMBOLISM.

It is well known that the signs of shock frequently follow fractures of the large bones.

Warthin (18) states that some fat is probably set free to enter the blood stream, either through the lymphatics or directly, in every case of amputation or fracture. He found that the amount of fat liberated is often incredible considering the amount of injury, and that the globules may lodge in the pulmonary capillaries or pass through and be found in the capillaries of other organs.

Bissell (19) examined 31 patients and found the normal blood fat to average .44 per cent. while in fracture of large bones in 10 cases the average was 2.47 per cent. reaching as high as 6.5 per cent.

On a number of occasions while transfusing patients with fractures and a low B. P. I have taken samples of blood and found a marked increase in its fat content.

Bissell (20) also reports fat embolism in a number of fleshy patients dying with signs of shock after operation on the breast, fat abdominal walls, omentum, etc.

Porter (21) believes that fat embolism may cause shock by embolism of the vasomotor region of the brain but not by pulmonary embolism.

Simonds (22) has shown that three-fourths of the pulmonary circulation may be occluded without affecting the systemic B. P. He also shows that it takes 1 c. c. olive oil per pound body weight injected intravenously in animals to cause a permanent lowering of B. P.

Fat in the blood stream in sufficient amounts does cause a low B. P. but at the same time it causes an increase of the venous pressure due to back pressure from the obstructed lungs. In shock from other causes the venous pressure is low and the marked dyspnea seen in fat embolism is absent.

It has been shown that fat in the blood greatly increases its viscosity and thereby increases the resistance to its passage through capillaries.

Whether fat embolism causes shock or not depends on what signs one may include in the definition of shock. The picture produced by marked fat embolism is slightly different from shock produced by hemorrhage and other causes. However, I believe that a moderate amount of fat in the blood of a patient who is cold, or has lost blood, may serve to turn the scales against the patient who would have otherwise recovered.

The effect of haemorrhage is to produce a diminution of blood volume with an accompanying low blood pressure. Following a hemorrhage there is an attempt on the part of the organism to raise the blood volume by an out-pour of fluid from the tissues; in a healthy person this can be done to a great extent, but if the hemorrhage is too severe, and other factors, cold, etc., enter, and there is too great a fall in B. P. the rate of circulation of blood decreases, leading to an insufficient supply of oxygen to the tissues and capillary stagnation. This takes out of circulation the already too few red blood cells and leads to still more tissue asphyxiation. If at this stage the blood volume and blood pressure is raised by intravenous injections these red blood cells are again put into circulation and recovery may take place. I have seen blood taken from dogs as long as it would bleed from a canula in the jugular, and then replaced by an equal amount of gum acacia salt solution and the dog in a few minutes was able to walk about and by the next day could run, and seemed in almost normal condition. This shows that even a very small number of red cells if kept in active circulation are capable of sustaining life until more can be manufactured. Under treatment I will take up the relative value of the various intravenous solutions.

Death after severe hemorrhage need not be immediate but may be delayed for some time. This is due to the gradual damage to essential organs from deficient circulation, and enough has been said to show how serious is this factor.

In shock from hemorrhage the patient is usually pale and lips blanches, while in shock in which hemorrhage is not the chief factor the patient has a grayish blue coloration. A more reliable sign however, is the blood count. In the former the red count is normal or low while in the latter it is above normal. A leucocytosis is also seen in haemorrhage.

EFFECT OF ANESTHETICS.

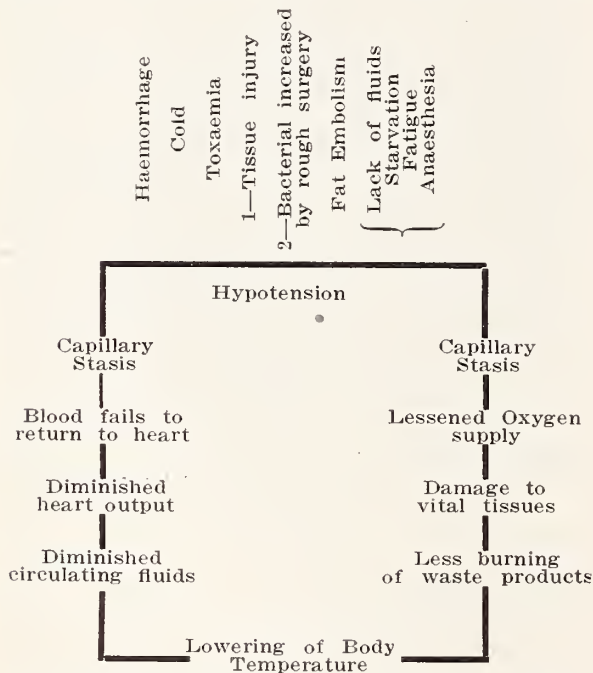
In the light of what has previously been said it is obvious that any further diminution of oxygenation of the tissues should not be allowed.

Chloroform has been shown to combine with the corpuscles and directly interfere with their function of transporting oxygen from the lungs.

It is well known clinically that a man in shock is sensitive to ether and that the ether alone without operation may cause the pressure to fall 30-40 mm.

Nitrous Oxid and oxygen does not seem to have this effect and is the anesthesia of choice.

Having considered the causitive agents in the production of shock it is interesting to note their relationship to one another and the possibility that one increases another producing a number of vicious circles which if not broken into by treatment would become progressively fatal.



The essential condition in shock is, as Prof. Cannon states it "a holding back of blood from normal currency." The blood fails to return to the heart hence the heart's outputs is lessened leading to lower B. P. which in turn gives less head against the clogged capillaries leading to still further capillary stagnation, cooling, friction, acidosis, etc.

OPERATIVE RISK.

In France we found that any patient with a B. P. of less than 100 systolic, was a poor operative risk with ether as an anesthetic, and an attempt was made to bring the blood pressure of every patient up to that before sending to

the operating room. In spite of this many went bad on the table if the etherization was deep, the operation long, if there was much loss of blood, or if there was rough surgery.

On the other hand the effect of developing gas or other infection, toxemia from muscle injury, crushed tissue, or broken bones may be more injurious to the patient the longer the operation is delayed. Every patient is an individual problem and all points must be considered before operation is advised.

TREATMENT.

If the B. P. is allowed to decrease until it is much less than half of normal and remains so for even a very short time it is rarely possible to restore it by any known means.

A B. P. of 70-80 systolic may be carried for several hours and still be brought normal by treatment.

Patients with fat embolism do poorly while those in which hemorrhage and cold is the chief factor respond best to treatment.

Keep the patient quiet. Give morphine enough to do this and to stop pain, but not enough to greatly retard respiration. Allow no rough handling either by the attendant or by the surgeon as this liberates more toxic bodies or fat from the site of injury. The Thomas splint has done much in the handling of fractures.

Elevate the foot of the bed, to facilitate the return of blood to the heart.

Leave the tourniquet on or if possible put one on to separate injured tissue from the rest of the body and also stop hemorrhage.

Restore to normal a lowered body temperature by means of hot air, hot water bottles, hot drinks and warm and sufficient blankets. Do not sweat as the body is already suffering from dehydration.

Supply fluids freely both by mouth and rectum. Give hot lemonade, hot chocolate, etc., by mouth as much as the patient will take. They usually vomit at first but this soon stops as they recover. I usually give by rectum a 5 per cent. sugar solution in saline, by the drip method. This should be at about 110 deg. F.

If no signs of improvement by these methods, or if the patient is more critical, intravenous methods should be used to restore blood volume and speed up the circulation.

Physiological saline solution subcutaneously or by vein is of about the same value as fluids by other means. In the less severe cases and those not suffering from anemia it serves to tide the patient over for a short time and

then permeates the capillary wall and leaves the active circulation.

Gum-salt solution as used in the A. E. F. consisted of 6 per cent. gum accacia in normal saline. This was made up, filtered, steralized and put in pint bottles for immediate use. The object of the acacia was to produee a colloidal solution, similar to blood plasma which would stay in the vessels and maintain the blood volume for a longer period than simple saline. At first the reports from its use were very encouraging but it soon fell into disrepute on account of the violent reactions often following it. I gave it to about 50 patients and in about half of them it raised and maintained the B. P. about 15-20 mm. In the other half I got the reactions, varying from slight ones to severe chills and a rapid decline in the patients condition. This stopped me using it. I noticed these reactions more from gum-salt which we had had for a few weeks and showed a precipitate or a milky appearance. Aeacia is a complex mixture of gums and the solution for intravenous use is attended with many and great diffieulties in its making, filtration, and sterilization, so many in fact that it is well to leave it alone.

Intravenous injections of other artifical serums, such as gelitin, glueose, etc., have been tried and discarded.

BLOOD TRANSFUSION.

This is by far the method of choice in the treatment of shock and hemorrhage.

Blood is the physiological thing intended to be in the vessels, and the transfused blood does two things and does it well, it restores blood volume, thereby raising the pressure, and it supplies the actual loss of oxygen carrying elements. Its most striking results are seen after hemorrhage, but in my own experience, which may be different from some reports, it is the most valuable procedure in all forms of shoeck.

In addition to the above two things which transfused blood does, it also undoubtedly carries from the healthy donor to the weakened recipient certain natural immune bodies to be used in the fighting of infection, which the transfused individual usually has to do.

In case of concealed hemorrhage the transfusion should be started as soon as the anesthesia is induced thereby preventing more hemorrhage from the raising of the B. P., and preventing further fall during the operative procedure. Repeated transfusions may be necessary in severe cases before the desired improvement is obtained.

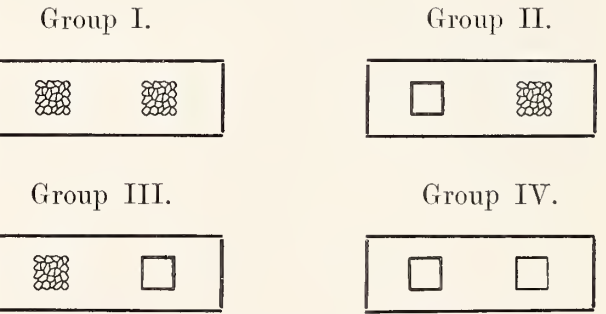
Technic.—Transfusion of blood should be regarded essentially as a transplantation of tissue, and demands the same attention to detail as is necessary for any successful tissue graft. Shawan's recent work shows that skin grafts do not take unless they are from individuals of a compatable blood group.

Selection of Donor.—It goes without saying that the donor should be healthy and free from transmissible disease.

All persons may be divided into four distinct groups regarding the action of their blood on one another. The following table shows the aglutinating and hemolizing properties of the cells and serum of the different groups.

Group	Cells (Aglutinin)	Serum (Aglutinigin)
I. 5%	AB	o Universal recip.
II. 40%	A	b
III. 10%	B	a
IV. 45%	O	ab Universal donor

By utilizing the serum of group II and III and noting their effect on the eells of the one to be tested, the group of the latter can be quickly determined.



In doing a transfusion one considers the effects of the recipients serum on the cells of the donor and can ignore the effect of the donors serum on the cells of the recipient because the serum put into the patient is quickly diluted. It is also probable that the recipients serum protects its own red blood cells. This statement is in agreement with the views of Lee and others, but one finds it contradicted in the recent report of the Interallied Surgical Conference (Press Med. 26:193, 1918) where it is stated that "fatal accidents have occurred from agglutination of the blood corpuscles by the donors serum, but the danger of this is relatively small."

Under no circumstances should a transfusion be done without first determining that the bloods are not incompatable. On two occasions I have had the unhappy experience, through mistakes in grouping, of starting a transfusion of incompatable blood, and both times hardly before I had put ten c. c. of blood into the

recipient he became unconscious and had a mild convulsion seizure with eye balls rolled up. Both recovered in about five minutes and complained of some pain in the chest. Recovery followed and no apparent harm was done but if the reaction had not occurred when and as quickly as it did and more blood had gone in, it is easy to see that the result would have been fatal.

METHODS OF TRANSFUSION.

History is replete with evidence that the development of blood transfusion has been a record of alternate triumph and failure since Harvey first gave his views concerning the circulation of blood.

Many methods have been used and a number remain. The methods remaining depend to a great extent on individual preference and skill with one particular technic.

1. Direct transfusion (artery to vein anastomosis).

This method has had its usefulness in the past but is little used now because of its difficulty and inconvenience, and the fact that one has no accurate means of estimating the amount of blood transfused.

2. Indirect methods.

A. Paraffin tube. With this method is drawn into special styles of glass tubes which have previously been coated on the inside with paraffin to prevent clotting. It is then quickly transferred to the vein of the recipient. Several styles of tubes have been devised. This method has been widely used and has given satisfaction, but requires cutting down on both veins, trained assistants, and considerable time in the preparation of the tubes.

B. Syringe-cannula method. This was devised by Lindemann. A special needle-cannula is first placed in the vein of both the donor and recipient and the blood transferred by 20 C. C. syringe fulls. Three operators are necessary, one to withdraw the blood, another to give it and the third to wash out the syringes. Special teamwork is required.

C. Stop cock and syringe methods. Here cannulas or needles are placed in the veins, as in the previous method, and blood is alternately drawn from the donor and forced into the recipient by changing the directions of the flow through the stop cock. Clotting in the blood channel is prevented by keeping the system well flushed out with saline. As in the Lindemann method donor and recipient must be placed conveniently close together. The Unger and the Freund apparatus belong in this class; with the former clotting is prevented by keeping a

spray of ether going on the blood syringe to keep it cold; in the latter 20 per cent. of saline is mixed with each syringe full of blood.

D. Indirect Citrate Method. Lewisohn first suggested and used sodium citrate to prevent clotting of blood in transfusion less than five years ago. Since then it has been used many times and it is safe to say that now the majority of transfusions are done by this method. It is the method used exclusively at the Mayo Clinic. It was adopted in the A. E. F. because of the following reason. (1) It is the simplest in respect to technic, (2) it is the simplest in respect to equipment, (3) it has given uniformly excellent results in a large number of cases and the presence of the sodium citrate has resulted in no practical disadvantage, (4) it is less of an operation to both donor and recipient for it seldom necessitates an incision over the vein, (5) it is virtually a medical procedure.

Another great advantage of this method is that the blood may be taken from the donor in one place and carried to the recipient in another. In fact it may be kept for some time. I have kept citrated blood as long as five days and eight hours. At three days, on microscopic examination, the reds were slightly crenated and the whites were slightly granular, but the platelets appeared normal. At five days and eight hours the reds were moderately crenated, the whites were very granular and some broken up, and the platelets gone. 500 C. C. of this was given to a patient with no chill and a prompt rise of B. P. and recovery from shock. Regarding the per cent of citrate to be used it has been shown that 0.2 per cent. will prevent clotting in most bloods but not all, and a 0.25 per cent. citrate prevents clotting in all, so this latter figure is the one usually used although as high as 1 per cent. may be employed. With 0.25 per cent. citrate in a 700 C. C. transfusion, $1\frac{3}{4}$ grams of sodium citrate would be injected. The toxic dose of sodium citrate is between 10 and 25 grams according to the concentration used.

Practically every patient needing transfusion has an acidosis and an alkali is of value in reducing it.

Pemberton of the Mayo Clinic says: "It is of interest that, clinically, the use of an anticoagulant in the transfused blood not only does not retard the coagulability of the recipient but possesses equal power of hemostasis with undiluted blood.

Technic.—The very fact of the apparent simplicity of transfusion with citrated blood has

undoubtedly led in many instances to a lack of appreciation of the care necessary in carrying out the technic, with consequent trouble.

The passage leading from the vein to the citrate must be of large diameter, as short as convenience will permit, and absolutely clean. The blood must be well mixed with the citrate at once, but it is also important to avoid undue agitation in fear of the possible physical destruction of the various blood constituents. In entering the vein a sharp needle should be used else maceration of tissue and clotting may occur. The needle is the most important part of the apparatus, it should be carefully sharpened and preserved. In sharpening it is important to produce a good spear point, which is best done by first making a curved bevel and then a bayonet edge by sharpening the back of each edge. It is then well to examine it with the microscope to see that no furred edges are present.

Any apparatus may be used. An ordinary glass jar and a salvarsan apparatus being the original outfit. Special bottles have been devised and are of value in facilitating the technic and protecting the blood from external contamination, especially when it is kept or carried. I have more recently been using a liter graduated bottle with the usual top with a two holed rubber stopper, containing two glass tubes. The blood comes in through one and gentle suction may be made if necessary through the other. At the bottom of the bottle is an opening with rubber tube attached and through which the blood flows out as with a gravity bottle. Blood however, is so thick that it flows poorly so I usually attach a B. P. bulb to one of the tubes at the top and exert gentle pressure, allowing 10-15 min. for 700 C. C. to flow into the vein.

Regarding the amount of blood to be transfused it seems settled that 500-750 C. C. is a safe amount, both for the donor and for the recipient, to guard against associated physical impairment such as cardiac lesions, etc. This amount should be repeated at intervals rather than give a large amount at one time.

It has been shown that transfused corpuscles are still in circulation and at work in the recipient over one month after transfusion by the citrate method.

Post-transfusion reaction. These occur as evidenced by chill, fever, headache, vomiting, etc., in from 10 to 50 per cent. according to the different writers. At the Mayo Clinic with 1000 transfusions a reaction occurred in 20 per cent. According to the literature, reactions occur slightly more often with the citrate than

with other methods. In my own experience reactions of a moderately severe chill have occurred in less than 10 per cent. It is probable that a fever has been present much more often.

The cause of the reactions is not known but probably is due to certain agglutination or haemolysis which does not take place outside of the body.

These post-transfusion reactions are apparently harmless.

Besides shock blood transfusion is of great value to alleviate or cure hemorrhagic condition such as hemophilia, hemorrhagic disease of the new born, etc., as a preliminary to operations, as a supportive measure in debilitated conditions; in the toxemias such as poisoning by gas, bichlorid etc., or the toxemias of pregnancy, especially when preceded by venisection. In the pyogenic infections transfusions seem to increase the patients vitality and aid in over-coming the infection. This is also true in critical periods in other diseases. In the blood diseases such as pernicious anemia repeated transfusions frequently bring the patient out of a relapse and add years to the life.

Since a transfusion can be of so much benefit and is so slight a tax on the donor we should realize whereas an error of omission may cost a life, an error in the other direction can cause but slight discomfort.

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ACRIFLAVINE IN THE TREATMENT OF VENEREAL CONDITIONS.

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An ideal drug for the treatment of gonorrhea should be:

1. Highly diffusible.
2. Non-toxic.
3. Non-irritating to the mucous membranes of the urethra.

4. Highly antiseptic, and,
5. Stable.

While experimenting to obtain an efficient internal urinary antiseptic—(1), (2), (3)—a drug shown experimentally and clinically to possess the properties enumerated above was found. David and Harrell (4) showed that acriflavine answered the requirements, and advocated the use of this drug in gonorrheal conditions.

Acriflavine has had a wide use in suppurating wounds, and as a prophylactic against infection. Browning, Gulbransen, Kenneway, and Thornton (5) quoted by Davis and Harrell, have shown it to be highly antiseptic and non-toxic. Harrell injected two ounces of a 1 per cent. solution into the bladder, and gave two-grain doses by mouth without any symptoms. Fleming (6), quoted by these workers, has shown the peculiar affinity this dye has for leucocytes. This may account for the reduced phagocytosis as found in this study, which condition is to be avoided, but, in this instance it may allow the dye to attack the organism more readily. After treatment with flavine the smears show only extra-cellular diplococci.

The degree of diffusibility was shown by Harrell by injecting a 1/10 of 1 per cent. solution of flavine into the bladder of dogs, sacrificing the animals immediately and then having sections prepared. Examination demonstrated that the dye had penetrated to the muscle layers of the urethra and bladder. It was found that acriflavine inhibits the development of the gonococcus in the high dilutions of 1:300,000, while protargol permits the growth even when the concentration was as low as 1:500. From this Davis and Harrell conclude that acriflavine has at least 600 times the strength of protargol against the gonococcus "in protein containing media." Harrell reported fifteen cases which were treated with acriflavine with the most successful results in from 1 to 16 treatments.

Bromberg (7) feels that flavine "is of some advantage but is by no means a specific." Hagner (8) expresses a similar view.

TECHNIC.

The character of the discharge was noted and a smear taken. The patient was made to void in two glasses. In anterior urethritis 3 to 5 c.c. of a 1:1000 solution of flavine was injected into the anterior urethra and was held from five to ten minutes. In posterior conditions 15 to 25 c.c. of the dye was injected into the bladder, distending the urethra. The portion in the urethra was retained for ten minutes, while the bladder portion was allowed to

remain until the next voiding. As most of the cases were of a chronic nature with acute exacerbation, it was decided to treat them all with posterior and vesical injections, and only in the truly acute cases was the anterior urethra alone injected.

All but eleven cases treated in this series were colored soldiers. Injections were given twice a day. An arbitrary course of twelve injections was decided upon. At the end of this course the men were put to work around the camp, and on the second and fifth days after discontinuance of the treatment, smears were taken and sent to the Port Laboratory, where the Gram stains were made and when both smears were reported negative, and their urine clear in two glasses, the men were returned to duty; otherwise, the treatment was resumed, and in some cases had to be changed until results were obtained.

As it was found that a large per centage of the men complained of burning and smarting, and several of frequency and nycturia, beginning after the fourth or fifth treatment, it was considered advisable to forego treatment for one day. Some of the cases that complained of this irritation were partially relieved by sodium bicarbonate, and as flavine acts best in an alkaline media 4, while chlor-mercury fluorescein 3, which promised as much as flavine, (the clinical work of this drug was interrupted by the war), was found to act best in an acid state, no objection to the use of sodium bicarbonate was seen, and, in the later cases it was given as soon as the treatment was begun.

In the chancroid cases, the sores were cleansed, and a cotton pledget, soaked in 1:1000 solution of acriflavine, was applied to the sore and wrapped up with gauze. This was changed from two to four times a day.

After bubotomy, the cavity was flushed with a 1:1000 solution of flavine and a drain, saturated with this dye, packed in the wound. This was repeated daily. After the second treatment the wound was usually free from pus.

RESULTS.

It was noticed that in 100 cases or 61.36 per cent. of the chronic cases, the discharge was controlled after treatment from one to six days, while in 55 cases or 33.74 per cent., the character of the discharge was changed to mucoid, and in 8 cases or 4.9 per cent., the treatment had no effect on the discharge. Though the discharge was controlled it was found that the organism did not always disappear as would be expected. It was found that if smears were taken during the course of the treatment, no

gram negative diplococci organisms nor any other organisms were found, whereas, if several days were allowed to pass giving no treatment and smears then taken, only extra-cellular gram negative diplococci organisms were found in some cases. It was also noticed that the smears were devoid of the secondary invaders usually found in these chronic cases.

The total number of chronic cases treated was 163. Of these, 97 cases or 60 per cent., had two negative smears after discontinuance of treatment for 5 days, i. e., no gram negative diplococci were demonstrated. These men had no discharge or only a slight mucoid one, if any, and the urines were clear in two glasses.

In 33 cases or 20 per cent. of this series the treatment stopped the discharge, but did not affect the organisms, as both smears were reported to contain gram negative diplococci, and in the other 33 cases or 20 per cent. of this study, the result varied, i. e., the first smear was reported negative and the second positive for gonococci, or vice-versa.

The total number of acute cases treated was seven. Of these two or 28.57 per cent. responded to 12 treatments, i. e., they gave two negative smears five days after discontinuance of treatment, while the other five or 71.43 per cent. failed to respond.

Recurrences took place with this treatment as with any other. In some cases this dye acted almost as a specific while in others, it seemed without any effect. It was also noticed, as Harrel pointed out, that where there was a posterior as well as an anterior urethritis, the posterior urethritis almost invariably improved first.

Although Harrel found little reaction following the injection of flavine, in this series, 65 cases or 39.9 per cent. of the total complained of severe burning on voiding. A few complained of frequency and nycturia. In view of this fact a 1:2000 solution has been used for urethral injections with better results. These injections were given twice a day, but the ideal treatment would be where a 1:2000 solution could be administered every four hours, for several days, to accustom the urethra to the dye and then to change it to a 1:1000 and inject it only twice a day. In the latter cases where this was tried, the results were most encouraging.

Acriflavine was used as a local application in 24 chancroid cases. Of these only 1 or 4.16 per cent. failed to respond to this form of treatment. In this condition flavine acts almost as a specific. In view of the fact that some of

these cases failed to respond to the ordinary treatment, when using Dichloramint T, Phenol, Silver Nitrate, Hot Potassium Permanganate, Calomel, Argyrol Crystals, etc., it is most encouraging to find these cases respond to the applications of acriflavine within 24 to 48 hours the pus disappearing and granulations forming. Ten cases of buboes were treated with excellent results.

Following are a few examples of the cases treated.

Case 1. This patient (colored) gave a history of a persistent purulent discharge for over one and a half years duration, during which time he received desultory treatment of protargol injections and irrigation of potassium permanganate. This patient was under observation for two weeks, during which time the ordinary treatments were administered without any improvement. Examination showed a profuse, purulent urethral discharge, which, on smear, showed numerous intra-cellular gram negative diplococci. This continued in spite of the treatments. The urine was cloudy in both glasses. He was given a posterior injection of the dye in the morning and afternoon. The next morning for the first time the patient stated he was dry and could not express even a drop of moisture. In order to get a smear the prostrate was massaged. The smear showed numerous pus cells and only one intracellular diplococcus was found after considerable search. After the fourth treatment a slight mucoid discharge was obtained and a smear on this showed mucous shreds and an occasional epithelial cell, but no organisms were found. This was repeated several times with the same result.

After the treatment was stopped entirely the same results were obtained. The patient had received 12 injections, and did not complain of any irritation. The urine was clear in both glasses.

The patient has been seen occasionally and his condition has not changed. In this case flavine acted almost as a specific.

Case 2. This patient (white) developed a urethral discharge while on board ship and received several injections of protargol. When seen he had a purulent discharge of ten days duration, the smears of which were positive several times for gonococci. The urine was cloudy in both glasses. The patient was then given posterior and vesical injections. The discharge diminished after the first day's treatment and stopped after the third.

This patient received 13 injections. Two negative smears were reported from the laboratory two and five days after discontinuation of treatment. The urine was clear in both glasses. The patient stated that the flavine caused intense burning and frequency. This was partially relieved by sodium bicarbonate.

Case 3. This patient (white) gave a history of exposure on January 24th. On January 28th he was circumcised by a civilian physician because of balanitis gangrenosa. On January 30th patient first noticed urethral discharge. He received 22 injections of protargol and argyrol before the case was seen. Examination showed a thick yellow creamy discharge, with smear of which showed numerous pus cells and intra-cellular gram negative diplococci. The urine was cloudy in both glasses. Posterior injections with flavine were started, and after the second treatment the discharge diminished. After the fourth treatment the patient complained of burning on voiding. This became so severe that treatment was stopped for 24 hours, and injections given only once a day thereafter. After the ninth treatment, the discharge, although diminished, was of the same character as before treatment. Only few organisms were found and they were extra-cellular. This continued until 15 injections were given, and as the patient complained of the severe pain caused by these treatments, they were stopped. Smears at this time showed pus cells, and only an occasional extra-cellular gram negative diplococcus was found after considerable search.

The patient was allowed to rest for a week until he developed the maximum immunity, when he was put on protargol treatment. This also proved to be without success. His case was one of those which did not respond to flavine except to diminish the discharge and clear up the posterior urethritis, as was shown by the second glass test which was clear.

Case 4. This patient (colored) had a sore at the coronal sulcus for a week before treatment of any kind was started. It measured approximately $3\frac{1}{2} \times 1\frac{1}{2}$ centimeters, involving the frenum, glans and the adjacent foreskin. For over two months this was treated with Dichloramin-T, phenol, silver nitrate, argyrol crystals, calomel, an ointment containing 3 per cent. salicylic acid, 20 per cent. calomel and bismuth, without being able to check the ulcer. Dark fields and Wassermann tests were negative. Flavine was applied locally to the sore, which responded in the first 24 hours. The sore was free from pus, clean looking, and granulating rapidly. In two weeks it had diminished to 1 centimeter. Owing to the lack of this dye, treatment was discontinued, and a 50 per cent. solution of silver nitrate and calomel powder was tried with no results. As soon as acriflavine was obtainable, it was again used and the patient showed marked improvement. At present there is a deep sore diminished to about $1 \times \frac{1}{2}$ cm. covered with granulating tissue.

Case 5. This case (colored) was unique in the

fact that there were two small sores adjacent to the meatus urinarius, making it difficult to treat. It did not respond to silver nitrate or phenol, nor hot permanganate. As this patient also had a urethritis he received injections of flavine, and in seven days after the injections were given, the sores had completely healed up from the excess of the dye which had gained access to the wound. The result is a deep scar. The urethral condition also responded well to this therapy.

The objections to the use of this drug are: that, it stains everything it comes in contact with; it is difficult to obtain the drug free from impurities, and when used in lower dilutions than 1:2000 it causes severe smarting in some cases.

SUMMARY.

From this study we can state that:

1. The discharge was controlled in 61.36 per cent. of the chronic cases in from one to six days treatment. In 33.74 per cent. the character of the discharge was change to a mucoid one, while in 4.9 per cent. of the cases it was without effect for 12 treatments.
2. Two negative smears were reported in 60 per cent. of the chronic cases 5 days after discontinuance of treatment, i. e., no gram negative diplococci were demonstrated. In 20 per cent. the discharge stopped but did not effect the organisms. In the other 20 per cent. of the cases the result varied, i. e., the first smear was reported negative and the second positive, or vice-versa.
3. Severe burning was complained of in 39.9 per cent. of all the cases, and was most intense in the acute cases.
4. Most excellent results were obtained after bubotomy.
5. In chancroids excellent results were obtained in 23 cases or 95.84 per cent.
6. Acriflavine has not answered the requirements of an ideal gonococcide clinically as stated in the opening of this paper, but it is a valuable addition for the treatment of venereal conditions.
7. This drug would be an ideal gonococcus prophylactic.

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THE COMMUNITY HOSPITAL.

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Out of the various types of hospitals, which are largely merely "Topsy" like growths, there seems to be crystallizing one which up to the present has only partially merited the name of Community Hospital. To be fully worthy of this name it should avail itself of all opportunities of serving the community and all members of the community.

There is likewise crystallizing a feeling that the quality of the service rendered to a community must not be merely a matter of chance but that there is an obligation resting upon the hospital to raise and maintain a standard in all departments as high as the size and wealth of the community affords and the ability of those rendering the service warrants.

There is likewise coming a change in our community educational system in that training for the duties of useful citizenship is more and more emphasized with the development of vocational schools and in this work the community hospital can serve as a useful adjunct.

In the following presentation of what the future community hospitals may be, there is no claim of originality and those familiar with the present day hospital literature and the discussion at many of the meetings of those most interested in hospital problems will readily recognize the sources drawn upon for material.

PURPOSES.

The Community hospital is first of all to be erected and run in such manner as to properly and intelligently care for all the sick and injured in its circle of support who are in need of hospital services. The whole organization must be at all times in accord with this ideal. Secondly it affords a complete modern shop in which the physicians of the community may advantageously work that their efforts may be productive of the highest class of service that can be developed by them. It should be a stimulus to progressive advancement in practice and should be an educational center for the diffusion of medical knowledge both new and old.

The community hospital should, through the peculiar advantage it has, train young women for the profession of nursing and help our vocational schools train prospective home makers in their duties as wives, mothers, housekeepers, cooks, sanitariums, nurses, teachers and citizens, all of which our women should be.

The hospital should serve as a center for the diffusion of all the branches of knowledge deal-

ing in the subjects of health and disease through its patients, nurses and doctors. To do this it must have the maximum of interest on the part of the people, the maximum number of patients in its beds and the support of the maximum number of its physicians.

PRESENT CONDITIONS.

In the table here appended is shown all the cities of the United States between 80,000 and 115,000 in size and their respective populations in 1918 (World's Almanac) in conjunction with certain facts regarding their hospital conditions (American Medical Directory 1918). It is found that they have an average of $5\frac{1}{4}$ hospitals per city and an average of 429 beds per city devoted to general hospital purposes. This means an average of about 80 beds per hospital. All of these cities could well afford hospitals with bed capacities of 500 to 1,000 and each have one large high grade institution supported by all and serving all.

It needs merely to be mentioned that one such institution could render a grade of service to its patients and to its physicians that is absolutely impossible in the numerous small ones. The difficulty is in developing the institution and uniting all concerned by such common interests that factions are fused and rival organizations are not needed.

It is self-evident that division of hospital efforts is a great weakness and in our community hospital securing the united support by everyone of one good institution is a great problem.

NUMBER OF PEOPLE SERVED IN HOSPITALS AT PRESENT.

At present we know that only a fraction of the people needing its services ever reach the hospital. This is due to a lack of popular interest in the hospital, general ignorance of its advantages, indifferent standards in such hospitals and consequently general suspicion of the work done therein and the lack of support by the majority of physicians.

In general there are three types of hospitals:

1. The "closed" hospital.

The work done here is limited to a chosen few and *while it may be exceedingly well done, patients entering bid their family physicians good-bye at its doors.* The direct loss of income through sending patients to such a place makes the support practically an involuntary one on the part of the outside physician. He will keep at home and treat any patient he dares take a chance with by so doing. He only freely sur-

renders him to the closed hospital under the following conditions:

- a. When the patient goes there without his advice or consent.
- b. When he fears because of lack of results the patient will be dissatisfied and go to a rival.
- c. When the patient's condition is such that he fears an outcome for which he does not care to become responsible.
- d. When the patient's illness obviously and urgently calls for services of a kind he does not render.

Self interest importunes him to keep all others away from such a place. Hence an organization which limits the work in the hospital to any number less than the great majority of physicians in the community served will necessarily withhold from its benefits proportionately large numbers of patients. *A closed hospital cannot be a community hospital.*

2. The hospital is an "open" one with no staff and no organized, intelligent effort to meet its obligations to furnish good service. Naturally such a hospital may serve the majority of physicians but not the majority of patients as it should and it will not win the desired confidence and support.

3. The "open" hospital with a medical staff. In such institutions either there are no earnest attempts to control the quality of the service rendered by the physicians or if such attempts are made the methods employed are such as to raise the quality of the work by the elimination of the weaker physicians. It becomes more or less of a closed hospital not by closing its doors to a few but by freezing out all but the staff members and physicians who are acceptable to them.

Hospitals of these types given cannot be truly community hospitals yet most of our hospitals can be put in one of the three groups.

SECURING GOOD SERVICE.

In hospitals generally the quality of the services rendered are in direct proportion to their approach to the closed hospital type. The quality is secured by restricting its resources to a few physicians who are selected from many and who give their best because of conditions developed under such circumstances. The standard set is the best a few selected men can give and is maintained by excluding all others.

Any such form of community hospital in obtaining its standards of quantity will bar most of the physicians and, as has been shown, most of the patients of the community from its beds. If just one hospital with high standards of work

is to be developed there must be two fundamental principles considered.

1. A quality of service must not be expected beyond the ability of its local physicians.

2. A maximum quality of such ability must be obtained and maintained by other methods than the primary exclusion of these physicians. In other words we must not eliminate a man because he does not render a certain kind of service but we must give him every facility and encouragement to develop the kind of service desired and let him naturally gravitate into that kind of work for which he fits himself with the aid given and only eliminate him at last, not because he does not do good work, but when after a sufficient time he shows he will not cooperate with the hospital in helping to give good service.

In open institutions where no particular control of the services rendered patients by the attending physicians is exercised the work done may be the very best and of a grade comparable with that of any institution, but there is a feeling that it is not always so and criticism and bad hospital reputations result. Investigation will frequently show a basis for such criticisms. The charges made against such hospitals are usually about the same. It is claimed that these are inexcusable errors in diagnosis, too much radicalism in treatment, unnecessary surgery, surgery by those lacking in training and ability and last and always the charges of criminal abortion.

There must be reasons for those things if they occur and only superficial analysis will show that they are the results of natural human traits when allowed to grow unrestrained in a suitable environment. They can be traced to indifference, carelessness, ignorance or cupidity. It is easier to render the environment unsuitable for their development than to suppress directly such common habits.

The hospital, which meets its obligations to the community supporting it, should by its organization and by its rules and regulations, in so far as possible exercise checks upon physicians who show:

- a. Indifference to the welfare of the patient.
- b. Carelessness in diagnosis and treatment.
- c. Ignorance of the usefulness of the resources of a hospital as aids in diagnosis and treatment and ignorance of the comparative values of methods and the end results of them.
- d. Cupidity with its family of professional sins.

The community hospital which will limit the

activity of these failings will do all it can well do to raise its standards and the result will be in direct ratio to the thoroughness with which this process is carried out.

THE SUPPORT OF THE PHYSICIANS.

It is a difficult task to organize and run a hospital along the lines laid down and at the same time secure good services and the support of the desired number of physicians. Not because physicians differ from other people but because they are asked to use a common workshop while at the same time they are rivals in business and have all the urgings of the "bread and butter" instincts. This condition is found in no other industry.

In seeking the aid of the physicians certain fundamental facts must be borne in mind, for disregarding any of them will lead to trouble and maybe disaster to the organization.

1st. Physicians like all other human beings are sensitive about being deprived of their "freedom of choice." The privilege of freedom to choose in our personal activities is the basic distinction between all desired liberty and all despised restrictions. This instinctive desire no autocracy can permanently suppress nor any paternalism satisfy. Those who served in the world war are still "sore" from the military customs of having others "make up their minds" for them. This must be kept in mind when attempting to standardize hospital methods.

2nd. Approximately 90 per cent. of the patients in the ordinary community are "pay patients." The direct mutual responsibility of patient and physician in such a relationship must not be interfered with nor undermined in any way.

3rd. The hospital must treat all doctors attending patients on a basis of equality before the community. A physician should not be belittled nor exalted directly or by implication. This must be particularly observed in staff organization. No physician should be arbitrarily barred from access to the hospital nor should a "freezing out" system be worked upon him.

4th. Probably 90 per cent. of the work in the usual community is done by general practitioners.

5th. The organization and the rules and regulations under which it works, should be so arranged that they function in an impersonal manner between physician and physician. The reasons for this are obvious. No system should require one practicing physician to supervise another's work, nor require one to act as a spy upon nor to discipline another.

City	Hospitals	Population	Beds
Albany, N. Y. -----	7	115,000	1192
Bismarck, N. D. -----	2	80,000	265
Butte, Mont. -----	4	90,000	370
Cambridge, Mass. -----	7	112,000	434
Camden, N. J. -----	3	112,000	335
Canton, Ohio -----	4	80,000	210
Charleston, S. C. -----	6	95,000	426
Chester, Pa. -----	1	82,000	125
Duluth, Minn. -----	5	110,000	552
East St. Louis, Ill. -----	6	90,000	254
Elizabeth, N. J. -----	4	95,000	550
Erie, Pa. -----	5	100,000	449
Evansville, Ind. -----	7	100,765	437
Fort Wayne, Ind. -----	5	85,000	337
Harrisburg, Pa. -----	7	80,000	253
Jacksonville, Fla. -----	8	112,000	393
Kansas City, Kan. -----	3	100,000	620
Knoxville, Tenn. -----	7	85,000	319
Lawrence, Mass. -----	5	100,500	354
Little Rock, Ark. -----	5	80,000	509
Lowell, Mass. -----	4	115,000	762
Lynn, Mass. -----	4	100,000	385
Oklahoma, Ok. -----	11	110,000	586
St. Joseph, Mo. -----	7	90,755	443
San Diego, Cal. -----	5	90,455	517
Savannah, Ga. -----	8	87,500	400
Somerville, Mass. -----	2	90,000	75
Troy, N. Y. -----	7	80,000	669
Utica, N. Y. -----	5	90,000	480
Waterbury, Conn. -----	3	115,000	251
Wilmington, Del. -----	4	112,000	340
Yonkers, N. Y. -----	7	95,000	430
Average -----	5 1/4	98,826	429
One bed to 230 people.			
(To be continued.)			

REPORT OF THE PSYCHOLOGICAL DIVISION OF MICHIGAN DEPARTMENT OF HEALTH FOR APRIL, MAY AND JUNE, 1919.

The Psychological Division of the Michigan Department of Health was organized March 15, 1919. The actual making of mental examinations began on the first of April. This report covers the first three month's work.

During this period 169 examinations were given but at the writing of this report seven of these had not been completely diagnosed and so were ignored in the statistical summary which thus includes 162 cases. Of these 162 cases two were diagnosed as insane, were given further examinations by psychiatrists and consequently committed to state institutions for the insane.

The remaining 160 cases were fit subjects for the measurement of intelligence, and a statistical study of the results is of interest. I will state briefly the method used in making the examinations. Each subject was given the Stanford Revision of the Binet-Simon tests and the mental age estimated on this basis. Other tests were used to supplement the Binet in practically every case. These were chosen according to the needs of the individual case and were mainly for the purpose of discovering special abilities and disabilities. As a basis for statistics it seems advisable to take into consideration only the mental age.

The accompanying table shows the distribution, that is, the percentage of cases at each men-

tal age, ranging from 7 to 18 years. All the subjects were 16 years or above chronologically and hence have reached the limit of mental development. It is therefore not necessary to allow for further growth in potential ability.

Mental Age	No. of Cases	Per Cent
7- 7.11 -----	7-----	4.0
8- 8.11 -----	12-----	7.5
9- 9.11 -----	13-----	8.1
10-10.11 -----	28-----	17.5
11-11.11 -----	28-----	17.5
12-12.11 -----	17-----	10.6
13-13.11 -----	24-----	15.0
14-14.11 -----	20-----	12.5
15-15.11 -----	2-----	1.25
16-16.11 -----	5-----	3.1
17-17.11 -----	3-----	2.0
18-18.11 -----	1-----	.6
Total-----	160	

Diagnosis	No. of Cases	Per Cent
Feeble-minded -----		31.0
Institutional -----	37	
Release -----	12	
Borderline -----	34-----	21.0
Subnormal -----	19-----	11.9
Dull-Normal -----	37-----	23.0
Normal -----	17-----	10.6
Superior adults -----	4-----	2.5
Total-----	160	
Mental disease -----	2	
Total-----	162	

20 per cent rank below 10 years—institutional cases by conservative estimate.

55 per cent rank below 12 years—definitely feeble-minded by Dr. Goddard's standard.

81 per cent rank below 14 years—below average according to U. S. Army standard.

94 per cent rank below 16 years—below average by Dr. Terman's standard.

I am giving the exact mental ages rather than the diagnosis, because standards of mentality differ among psychologists, and are changing as we obtain more data regarding actual conditions. The interpretation of these results depends largely on the point of view, in comparing them with other findings.

At the present time it is generally conceded that no adult with a mental age below ten years is capable of living a normal social life under ordinary conditions of society. These are considered institutional cases. Twenty per cent of our subjects fall into this division.

Until a few years ago the upper limit of feeble-mindedness was set at twelve years. This was found by mental tests made on individuals who were already inmates of the institutions for the feeble-minded by reason of having shown that they lacked the mentality to manage their own affairs. This standard is now thought to have been too high owing to the fact that we find many individuals with the mental age of from

10 to 12, who are capable of living normally outside of institutions. However, it is interesting to note, that according to this less conservative estimate 55 per cent of our subjects are institutional cases.

Recently in determining the intelligence of the drafted men in the U. S. Army the average mental age was found to be 14 years. Eighty-one per cent of our subjects fall below this level. The average mental age of our group of subjects is 11.5.

Until last year when the results of the army tests were made known the average mental age of the general population was thought to be 16 years. Ninety-four per cent of our subjects fall below this level. Thus according to Dr. Terman's standards there are only 6 per cent of our group who can be considered average or above.

In a general way it matters little whether we interpret these results by a conservative or liberal standard. It is clear in either case that feeble-mindedness is a very large factor in the problems of venereal disease. The diagnosis which we made are given in a separate list. We found 31 per cent definitely feeble-minded, and in 23 per cent of our cases we recommended commitment to the institution for the feeble-minded at Lapeer. I believe that the majority of these commitments have been legally made, but am not able to state the number exactly as some are still being handled by our court worker.

It will be noticed that our group falls into three large divisions:

1. The group below 10 years. (20 per cent).
2. The group of the mental age of 10 to 14 years. (61 per cent).
3. The group above 14 years. (19 per cent).

The existing institution for the feeble-minded at Lapeer will care for the first group when its capacity is enlarged. The third group possess sufficient intelligence to respond to efforts to readjust them in society. The middle group is unprovided for, and this middle group contains the majority of our venereal patients. Not definitely feeble-minded, but retarded mentally, once having become delinquent, reform under the ordinary conditions of society is most difficult, under favorable circumstances they develop many qualities which tend to make them desirable citizens. Turn them back to their own surroundings and they return to their old habits. It is inevitable. In most cases the old environment means unsettled and broken homes, from which with a few exceptions they come. They must have training, sympathy and supervision, re-education in its largest sense. How are we to give it to them? There is only one solution. We need an institution for defective delinquents with a mental age of 10 to 14 years. By means of such an institution this large middle group could be re-educated and readjusted to society.

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ACIDOSIS: ITS DETERMINATION BY MEANS OF H-ION CONCENTRATION.

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Under normal conditions in the human body the blood is slightly alkaline in reaction. Under conditions of health it is uniformly maintained at this reaction through the influence of the bicarbonate, phosphate and proteins of the blood. It has been shown that even a neutral reaction of the blood would be incompatible with maintenance of life; hence, the term reduced alkalinity of the blood would be a better expression. However, the word acidosis will be used as it is more frequently employed in present day literature.

Acidosis is an important consideration in many disorders such as diabetic coma, chronic nephritis, pernicious vomiting of pregnancy and in certain gastro-intestinal infections. Pneumonia is accompanied by acidosis, often of serious degree, subsiding rapidly after the crisis (1).

There are various means of determining the relative degree of acidosis. Among the different methods the following are probably the most reliable: (a) direct estimation of the H-ion concentration of the blood, (b) determination of the CO_2 content of the blood, which decreases as other acids increase or the bases decrease, (c) determination of the CO_2 tension of the alveolar air, (d) determination of the capacity of the blood to bind CO_2 and (e) determination of the amount of sodium bicarbonate necessary to produce an alkaline urine. Of these five methods the first one, namely, the estimation of the H-ion concentration of the blood as devised by Levy, Rowntree and Marriott (2) is without doubt the most simple and rapid. At the same time accuracy and dependability are in no way sacrificed.

Before taking up the method and its application a few words by way of explaining some of the terminology used in connection with H-ion determination would not be amiss. A solution is neutral when it contains the same number of hydrogen (H) and hydroxyl (OH) ions, acid when it contains an excess of the former and alkaline when an excess of the latter predominate. An acid of "normal" strength contains per liter one gram of hydrogen capable of forming H-ions. 1-10 normal acid contains 1-10 gram of hydrogen ions to the liter. Continuing the dilution until 1-10,000,000 is reached we have 1-10,000,000 gram of hydrogen ions per liter. Pure water, which is neu-

tral in reaction, dissociates into hydrogen and hydroxyl ions and at approximately room temperature contains 1-10,000,000 gram of H-ions and an equivalent amount of OH ions. Therefore, pure water is 1-10,000,000 normal acid and 1-10,000,000 normal alkaline. This is known as pH 7. pH 8 means 1-1,000,000 normal alkaline and pH 6 means 1-1,000,000 normal acid. By means of a colorimetric scale all pH values may be determined easily from pH 1 (1-10 normal acid) to pH 14 (1-10 normal alkaline). Standard mixtures of primary potassium phosphate and secondary sodium phosphate are so made up that the desired range of pH values are obtained. Sørensen (3) and later Clark and Lubs (4) made an extensive study in regard to the application of indicators for this purpose. Different indicators added in small amounts to these different phosphate mixtures show their color changes at varying degrees of H-ion concentration. Methyl orange changes from pink to yellow as the pH of its solution changes from 3 to 5, Congo red changes from blue to red as the pH of its solution changes from 4 to 5, phenolphthalein changes from colorless to pink between pH 8 and pH 10. The indicator used for determining the H-ion concentration in blood is phenolsulphonphthalein since it shows very definite variations in color changes between pH 6.8 and pH 8.4. The reaction of the blood varies approximately between pH 7 and pH 8. However the neutral point (pH 7) is reached only in severe uncompensated acidosis and pH 8 is reached probably only subsequent to the administration of alkalis.

The method of determining the H-ion concentration of the blood is simple, one which can be easily performed at the bed-side of the patient if necessary. The blood is taken from a prominent vein at the bend of the elbow, the tourniquet being applied only just before the specimen of blood is to be taken. The needle is plunged into the vein and the blood removed with as little loss of CO_2 as possible. If whole blood is to be used a very small amount of powdered potassium oxalate (free from carbonate) should be placed in the tube into which the blood is to be drawn. As soon as possible and with the least possible shaking transfer approximately 3 cc of the blood by means of a pipette into a carefully prepared collodion dialyzing sac (120 x 9mm) which has been washed inside and out with 0.8% NaCl solution. The sac is then lowered into a test tube (100 x 12mm) containing 3 cc of 0.8% NaCl solution and allowed to remain there until the

fluid on the outside of the sac is at the same level as the one inside. The dialysis should be allowed to take place for ten minutes. If allowed to proceed longer than this soluble proteins may appear and interfere with a proper reading of the result. The dialyzing sac is removed and 0.2 cc of a 0.01% phenolsulphonphthalein indicator solution added and well mixed with the dialysate. Then compare the tube thus treated with the series of standards until the corresponding color is found. Reading must be made immediately after dialyzation and a good light and white glass background are necessary. Two determinations at least should be made provided there is sufficient blood for the second test.

In normal individuals oxalated blood yields a dialysate which has a pH from 7.4 to 7.6 while that of the serum varies from 7.6 to 7.8. It appears probable that the slightly greater acidity of the whole blood is due to the fact that hemoglobin and especially oxyhemoglobin react as a weak acid.

Levy, Rowntree and Marriott (2) report the results of studies on H-ion concentration of the blood of eight cases showing clinical or laboratory evidences of acidosis (or both). One was a severe eclampsia accompanied by severe toxemia. On date of admission the blood serum showed pH 7.5 and the whole oxalated blood, pH 7.3. Four days later after alkali-therapy the acidity was reduced; the serum was pH 7.8 and the blood was pH 7.5. Another case with sarcoma of the kidney and antrum with an acidosis complication showed the serum to be pH 7.2. The following day the patient improved after large doses of alkali (175 cc of a 5% solution of sodium bicarbonate by the Murphy method followed by 175 cc of a 4% solution of sodium bicarbonate intravenously) and the acidosis was decreased, the H-ion de-

termination revealing a pH of 7.45. Nine days later more alkali was given with the result that the acidosis was still further decreased, in fact, the serum showed a pH value of 7.8, a normal reaction.

In cases where the determination cannot be made at the bed-side or taken immediately to the laboratory but must be sent from a distance a sterile Keidel vacuum tube filled full with the blood should be sent to the laboratory as soon as possible after its removal from the patient. Levy, Rowntree and Marriott (2) have shown that the pH of serum and oxalated blood does not change appreciably during the first 24 hours subsequent to removal of the blood provided the tube containing the blood is well stoppered. This is possible to obtain with a Keidel tube as the blood clots in the bore of the needle and in the connection between the needle and the bulb.

It has been clearly demonstrated that the determination of the H-ion concentration of the blood is a simple, rapid and accurate method for the detection of acidosis. It has been shown that oxalated blood from normal individuals gives a dialysate with a pH varying from 7.4 to 7.6 while that of the serum ranges from 7.6 to 7.8. Variations of these figures toward the neutral side (pH 7) are encountered only in conditions which clinically and from the laboratory standpoint indicate an acidosis. This method will not only indicate an acidosis and its relative severity but also serves as an excellent check on the progress or non-progress of alkali-therapy in the treatment of acidosis.

REFERENCE

- (1) Lewis and Barcroft, *Quart. Jour. Med.*, 1915, (8), p. 108.
- (2) Levy, Rowntree and Marriott, *Arch. Int. Med.*, Vol. xvi, p. 338.
- (3) Sorensen, *Ergebn. d. physiol.*, 1912, Vol. xii, p. 393.
- (4) Clark and Lubs, *Jour. Bact.*, Vol. ii, p. 1, p. 109, p. 191.

In 2,980 cases of acute lobar pneumonia (pneumococcus), reported by various writers, 29 per cent were of type I, 21 per cent of type II, 11 per cent of type III, and 39 per cent of type IV.

The following conclusions are drawn:

1. About 30 per cent of the cases of acute lobar pneumonia are due to type I organism.

2. An immediate diagnosis of the type is essential for the early administration of specific sera.

3. The use of polyvalent sera is irrational

and unjustified.

4. Careful use of type I serum in type I pneumonia is safe.

5. Sera of types II, III, IV are useless in any type of pneumonia.

The serum of type I has reduced the spread of type I pneumonia process and the mortality to a sufficient extent to indicate its universal application.

(*Bost. Med & Surg. Jour.*, Feb. 26, 1920, L. H. Spooner).

Kalamazoo, Michigan



PRESBYTERIAN CHURCH.

The place now occupied by Kalamazoo was first settled in 1829 by Titus Bronson. It was incorporated as a village in 1843 and for many years enjoyed the distinction of being the largest village in the United States. Earlier in its history it was more of an agricultural center, being in the midst of a broad area of prairie land and oak openings. In later years, however, as has been the experience with other Michigan cities, manufacturing enterprises have predominated. It was incorporated as a city in 1884.

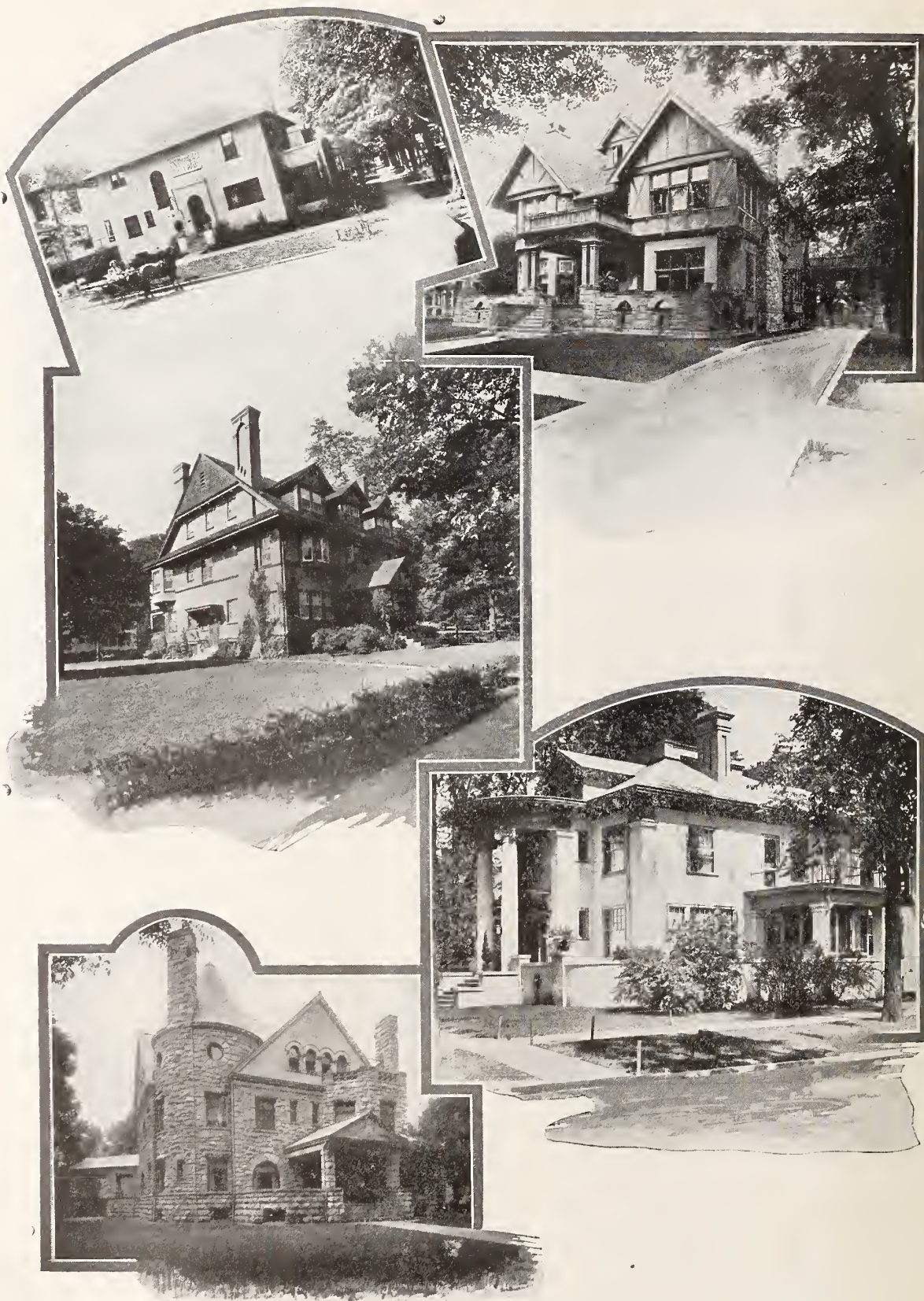
Kalamazoo is located midway between Detroit and Chicago and fifty miles south of Grand Rapids. It is situated in the center of Kalamazoo County and is the County Seat. All parts of the county are easily and quickly accessible over the best gravel or concrete roads. There are many lakes of various sizes within an hour's automobile ride, which contribute to the comfort and recreation of Kalamazoo citizens during the summer months. The Kalamazoo River on its way from the middle of the State to Lake Michigan flows through the center of the city. The land in and about the city is sufficiently rolling to insure good drainage and the most healthful living conditions. Its population at the present time is fifty-six thou-

sand with a very small percentage of aliens.

Kalamazoo can be reached over the Michigan Central, Main Line; Michigan Central, South Haven Branch; New York Central, Grand Rapids Branch; Grand Rapids and Indiana; Chicago, Kalamazoo and Saginaw; Grand Trunk and Kalamazoo, Lake Shore and Chicago Railroads. In addition to these steam lines two interurban systems connect us with Grand Rapids on the North and Detroit and intervening points to the East.

The government of the city is vested in a City Manager, Mayor and Commission of seven members elected annually. The city owns both its own electric light plant for the street lighting system, and also the water system of the city. A whole time Health Officer in charge of the Department of Health is one of the many creditable undertakings of the city government. A modern efficient motorized fire and police department are also among the city's enterprises, the Police Department being housed in its own special building.

Kalamazoo has for many years been known as a city of homes, there being an unusually wide distribution of high grade residences. Originally these were mostly in the lower land but in recent years, since the city has been



VIEWS OF KALAMAZOO RESIDENCES.



VIEWS IN BRONSON PARK.

growing so rapidly they are extending farther out on the surrounding hills. There are many miles of paving in the city and these with well kept lawns have been the subject of much favorable comment on the part of visitors.

Michigan, but they have also enjoyed national recognition. There is also a high grade business college and several parochial schools. There are two higher institutions of learning in Kalamazoo. The Western State Normal School, the



MAIN AND ROSE STREETS.



VIEWS IN MILHAM PARK.

Appreciating that the basis of the best citizenship in any community is in the quality of its public schools, Kalamazoo has met this responsibility by a most modern public school system, the quality of which is such that they are not only recognized by the University of

largest State Normal school in Michigan, and the Kalamazoo College. Both institutions compare in quality of work with other similar institutions in this and other states. Strongly endorsed by the educational institutions, the Kalamazoo Choral Union and the Kalamazoo



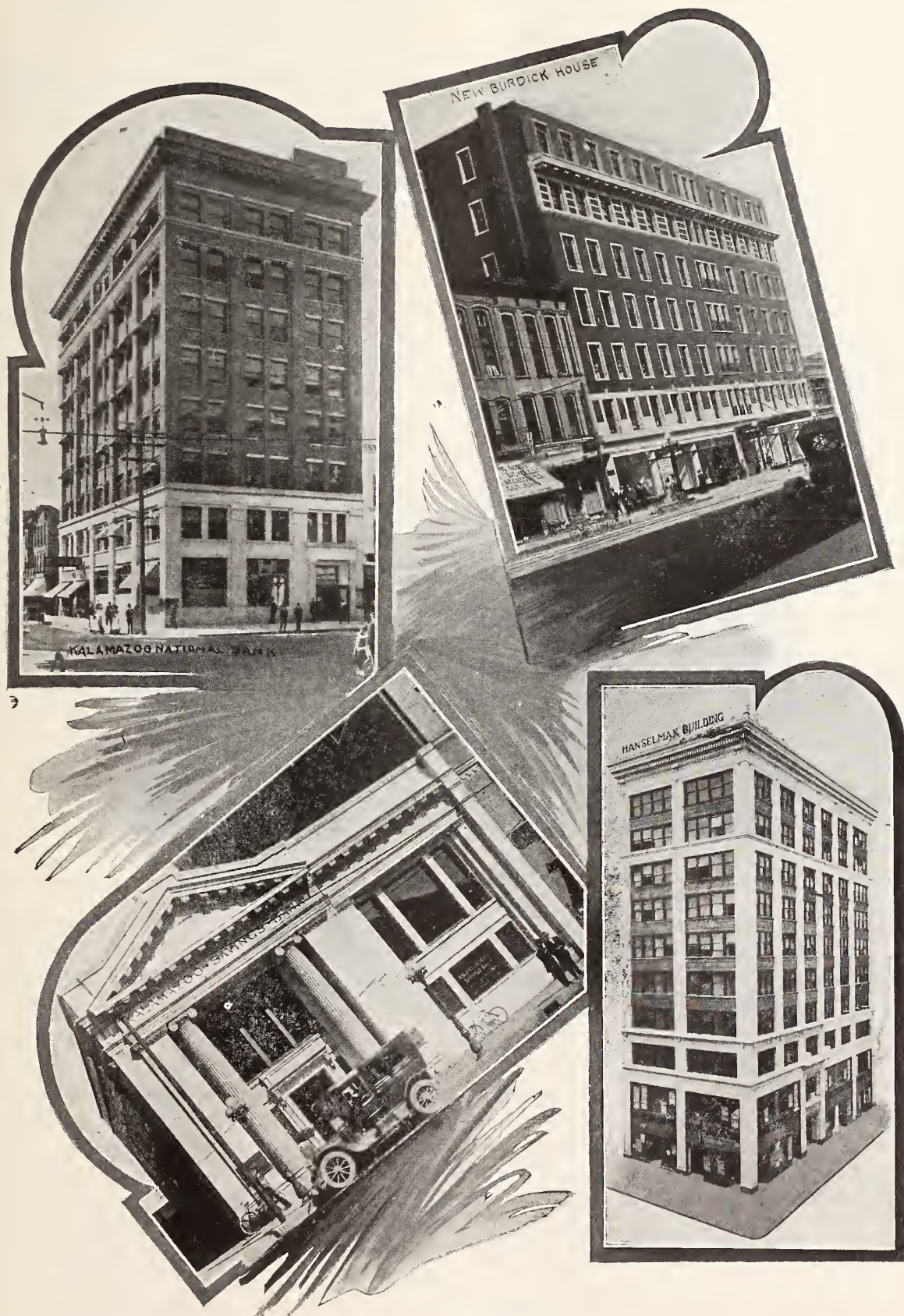
OAKWOOD PARK.



CELERY INDUSTRY.



WATER WORKS (CENTER) FOUR FIRE
DEPARTMENT BUILDINGS.



DOWN-TOWN DISTRICT.

UPPER LEFT—KALAMA NATIONAL BANK BUILDING.

UPPER RIGHT—BURDICK HOTEL.

LOWER LEFT—KALAMAZOO CITY SAVINGS BANK.

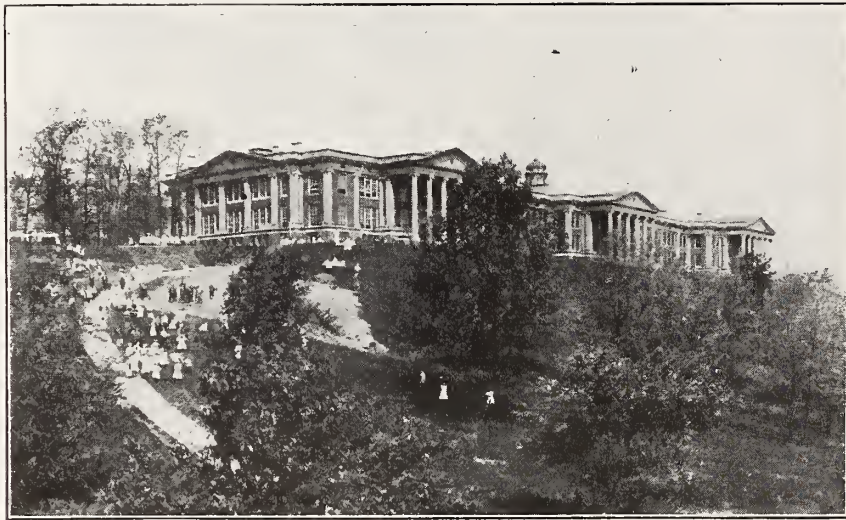
LOWER RIGHT—HANZELMAN BUILDING.

Musical Society have done very commendable work in developing musical taste in this community, by bringing to the city many musical artists of world renown.

Originally Kalamazoo was mostly famed for its celery but in recent years manufacturing has greatly predominated over this more agricultural product. At present the largest item of manufacture is that of calendar and book paper. There is, however, a very greatly diversified industry in addition to paper, including everything from a "Kalamazoo Direct to You" stove to automobiles. Of interest to the medical profession is the large amount of high grade pharmaceuticals which are produced in Kalamazoo and which includes control of the major portion of the peppermint industry of

of contagious and infectious diseases; in all provides about eighty beds. This Hospital is located in the Northwest part of the city and the private sanitarium of Dr. B. A. Shepard, for the care of early tuberculosis, is beautifully located in the Southern part. Among the other medical activities of the city may be mentioned the Infant Welfare Service and also the Free Clinic for Tuberculosis held under the direction of the Department of Health. A very active and efficient Juvenile Court is conducted under the direction of Judge Samuel H. Van Horn.

Kalamazoo is the home of the Kalamazoo Academy of Medicine, which organization includes the medical membership of the State Association in Allegan and Van Buren as well as Kalamazoo County.



WESTERN STATE NORMAL SCHOOL.

the world. Among the manufactures should also be mentioned several large printing houses for blank record books, regalia and uniforms, sanitary and plumbing supplies. On account of the excellent railroad shipping facilities a great increase in new manufacturing enterprises is now being experienced by the city. One of the largest plants now being erected is that of the Handley-Knight Motor Company. The industry of Kalamazoo has behind it four well organized and sufficiently capitalized banks.

Kalamazoo is well equipped with hospitals. The Kalamazoo State Hospital for the Insane being the largest and oldest institution, now caring for over Twenty-two hundred patients. There are three general hospitals, the Old and New Borgess Hospitals have together about 225 beds and The Bronson Hospital having fifty beds. The Fairmont Hospital for the care

Kalamazoo owns several parks. Two of these are centrally located and well improved. Several others are of more recent acquisition and lie further out, anticipating future growth of the city, but already offer recreation for thousands of people in the summer time.

Kalamazoo is interesting to tourists as one of the chief points in the course of several of the trunk line automobile highways. It is therefore very accessible for those who wish to drive. The roads are especially good to the East and North. The roads to the West and South in several places are now under construction. Abundant garage and hotel accommodations are available at all times of the year.

The Kalamazoo Chamber of Commerce is a very live organization, ever alert in answering inquiries concerning the city and its opportunities to manufacture or to those seeking homes.

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April

Editorials

COMMUNITY HOSPITALS.

The problem of providing hospital accommodations in different communities is one of vital concern and is receiving thought in several localities in Michigan. The day is past when hospitalization of patients can be thought of only in our larger cities. Hospital facilities must be provided wherever a group or community of individuals reside. In some instances such a hospital will be in the smaller cities and villages, while again it will be found best located in the center of our more sparsely settled counties. The locality is best determined by selecting that locality wherein it will be of greatest accessibility to the largest number of residents to be served.

Medicine, surgery and the allied specialties have advanced in their theory and practice to such a degree that to bring unto the sick their greatest benefits there is demanded specialized

attendance and care on the part of those who carry out the orders and directions of the attending physician or surgeon. In the administration of treatment more is called for than the giving of a pill or teaspoon of medicine. A correct diagnosis cannot always be reached by thermometer, pulse or a look at the tongue. In fact, they who have remained abreast with the progress of the profession realize the need of institutional care. The public has not remained in step and is just now commencing to realize that without hospitals they are deprived of modern care and treatment. Hence, the present consideration of the solution of how best to provide hospitalization is occupying the attention of several communities.

Dr. Manwaring, of Flint, has devoted considerable time in securing data and compiling information upon this subject. We have been fortunate in securing him to consent to write out that which his investigations have developed and describe those plans which promise a satisfactory solution for communities desirous of securing hospital facilities. We are publishing the first installment in this issue and the remainder of the article will be published in the May and June issues. We feel certain our members will appreciate Dr. Manwaring's articles and that they will be of distinct value to our readers.

ORGANIZATION OF INDUSTRIAL PHYSICIANS AND SURGEONS. CALL OF MEETING.

It is recognized that Industrial Medicine and Surgery is today a distinct Specialty. That the medical and surgical problems of industry today demand more and more special and detailed methods of professional care and services. The profession today is recording increasing numbers of men who are devoting all or a large majority of their time to industrial work. A National Association of Industrial Physicians and Surgeons has been in existence for four years. It is now felt that the time has come when a Michigan unit of this National Association should be formed to provide a forum wherein Michigan doctors who are interested in In-

dustrial Medicine and Surgery may have an opportunity of discussing the problems and work of this specialty.

To attain that end a meeting of all those who are interested in this Specialty has been called to be held in Kalamazoo on May 26th at 4:30 p. m. in conjunction with the Annual Meeting of the Michigan State Medical Society. Dr. H. N. Torrey of Detroit will act as temporary Chairman. Dr. Harry Mock of Chicago, President of the American Association of Industrial Physicians and Surgeons will be present and will give an address.

We request that all those who are interested in this work and who are desirous of aiding in the formation of a Michigan Unit will plan to attend this meeting and advise Dr. H. N. Torrey, Whitney building, Detroit, of their intentions and co-operation.

ANNUAL MEETING

As announced, the annual meeting will be held in Kalamazoo, May 25, 26 and 27. Members are urged to make their room reservations at the following hotels:

Hotel Burdick.
Hotel Park-American.
Hotel Rickman.
Hotel Columbia.

Those desiring a room in private homes will be assisted in securing such accommodation by writing to Dr. C. E. Boys, Kalamazoo.

The meetings will be held in the 1st Baptist church, Congregational church and the Y. M. C. A. These buildings adjoin and will provide splendid auditoriums for section meetings.

The completed program will appear in our May issue with detailed information. We urge now that you not only plan to attend but also that you make your hotel reservations.

NEW ORLEANS—A.M.A.

The annual meeting of the American Medical Association will be held in New Orleans the week of April 25th. Michigan should be well represented for an interesting program

has been arranged. In addition there will be numerous entertainment features and pleasant side trips.

Don't fail to secure your hotel reservations. The Hotel Committee will undertake to see that you are comfortably located if you but write to them.

DUES.

Once more we wish to remind those who have not paid their 1920 dues that their names will be transferred to the delinquent list and be in suspension after April 10th. In addition their Medical Defense terminates and the Journal will be discontinued.

We urge all who have not done so, to at once send their dues to their County Secretary and thus obviate such suspension. *Send in your dues today.*

Editorial Comments

In New York City and Brooklyn there are a number of doctors catering to some of the plutocratic social workers and lending their support to the propaganda for Compulsory Health Insurance. These "docs" have the conceitedness to assume that they are the mouth pieces of the profession and have been busting into print with some very pronounced statements. They have enlisted a few satellites in other states who are their tools. It's about time they were being sat upon and the House of Delegates of the A. M. A. must accomplish that procedure at its New Orleans session.

You may have cheap drugs and instruments offered you by mail circulars. Don't buy them because they are high priced in the end. A certain, pay by the month house, for instance is offering a CO₂ outfit for making snow pencils for \$50.00. The equivalent can be purchased for \$12.00. Don't fall for these so-called bargains. Our advertisers are honest and deal in honest goods at honest prices. Patronize them and know that you are not getting "stung."

Our mail recently contained an appeal for financial subscription to a fund to aid "our starving colleagues in Germany and Austria."

We have never come in contact with these "starving colleagues" and never want to, but from war time reports of their attitude and from our own boys who were unfortunate prisoners we learned of some of their treatment and with that information we are of the opinion that these so-called "colleagues" had better starve awhile.

To our American colleagues who are leading this movement we recommend that they look about at home and lend their energy toward aiding some of our own professional brothers. We have a goodly number of our own doctors who went forth, relinquished their practices, experienced hardships that have affected their health and also their bank accounts who need and merit assistance first. As a profession we are neglecting them and so are our medical centers and schools. We have yet to see a school, hospital or clinic offer a reduction in their courses for ex-service doctors. We know there are a number who would take advantage of a post-graduate course could they but afford it. Then after we have cared for our own men, if our hearts are still big we might well help our French and Belgian colleagues. Then, when that is done, it might be time to consider the "hun" colleague, but now—emphatically no—.

The American College of Surgeons has acquired a \$100,000 building for its headquarters in Chicago. The American College of Physicians an equally influential and meritorious organization that held a most successful annual meeting in Chicago in February is also seeking a national headquarters. Might it not be well for them to secure adjoining quarters and thus centralize in our central metropolis the executive offices of these two important national organizations? We are pleased to record in our news columns the names of Michigan physicians who obtained fellowships at the last convocation.

We note in an Eastern medical journal that some two hundred doctors in New York and Brooklyn have formed a union and have applied to the American Federation of Labor for a charter. The next step we presume will be the fixing of union hours, a scale of wages and overtime charges, defining of apprentices and helpers and the staging of a strike or two. Just about then some utopian idealist will apply for a restraining injunction and blooey—up goes the doctor's union. And yet they say New York and Brooklyn is to be the medical center of the world—well, probably the union is needed for

a welcoming body for Russian and German visitors.

We have all acquired a more or less brusqueness and are not always as considerate of our associates as we might be. Gradually there has grown upon us a self-centeredness wherein there is lacking the spirit of consideration and tolerance—to say nothing of courtesy and deference. If opportunity presents, pick up a volume of a medical journal dating back thirty or forty years; read some of the articles and discussions. One is at once appreciative of the dignity, courtesy and deference of those doctors of forty years ago, men of the old school, who, though they differed in opinions and did have their "fights," still maintained a bearing that inspired respect and won approbation. Today we are too much inclined to be overbearing and to disregard he or she who disagrees. We snub, ignore, malign, insinuate and condemn each and all who do not align themselves with us. It is an unhappy state of affairs nourished by our jealous natures. May we not well retrace our steps; acquire and practice the customs and courtesies of the doctors of thirty and forty years ago?

Doctor—your dues—have you forgotten to pay them? Remember April 10th is the last day of grace and unless your dues are received by the State Secretary on that day you are automatically transferred to the suspended list. Please do not permit this to happen.

The New Orleans meeting of the American Medical Association is worth while attending. Michigan should be well represented at the section and general meetings.

Indiana has just discontinued its full time executive secretary. Ohio, we also understand has dispersed with its full time executive. The reasons for these changes are not set forth. We are of the opinion that well organized county societies are more influential than a full time state executive, for to exert influence and attain results, it is team and not individual work that counts. Plans are well under way to develop this team work in Michigan during the next year.

We are still in a "state of war" with Germany. They are still discussing the League of Nations in Washington. Some there are who hope some

of our states will find a way to return to the "wet" column. Poker remains in the lead as the "old army game," in spite of craps. We have had 103 days of sleighing this winter. The railroads have gotten out from under—and they are still talking of interstitial glands at the ladies afternoon bridge parties. War is all that Sherman said it was, but this present day turmoil beats war. Here's hoping we can survive this year and that a new president will usher in a new condition of national affairs.

Compiled statistics refute the arguments of the self appointed who seek to thrust the yoke of Compulsory Health Insurance upon the profession's neck. Failing in Russia, Germany and England and producing conditions that this country would not tolerate, still they persist in their efforts to force this measure upon us. It's a graft pure and simple for those who spread the propaganda, for, their reward will be a salaried offices with administrative authority and tax payers footing the bills. We repeat the need of every county society devoting an entire meeting to the discussion of this subject in order that a concerted movement may result to prevent its adoption in Michigan. The proponents are now active in our midst; you and your associates need hurry to counteract the sentiment they are already creating.

The annual meeting in Kalamazoo will be more than worth your while to attend. Plan your work so that you will be present May 25, 26 and 27. Sure there are going to be social features. Watch for the full program in our next issue.

Time was when our medical journals contained practical articles setting forth an accepted line of treatment of a given condition. The author was always prone to publish his formulas or medicinal combinations. Therapeutics was an art exhibiting a thorough familiarity with the potency and effort of a given remedy and how best administered. Rarely do we see such an article in print today. Surely, we realize that our present knowledge has relegated to the scrap pile much that was empirical. However, there still remain certain remedies that are potent and of value and whose exhibitions are still indicated. Will not some one write us an article about them? We must have some amongst us who have not wholly succumbed to serums and the scalpel. We admit a lonesomeness for cimicifuga, squills, Spts. Arther, Nitrosi Cantharides,

antimonium, calamus, colchicum, gelsemium, jalap and a host of other old friends of therapeutic lore.

In 1917, the House of Delegates of the A. M. A. passed a resolution that set forth: "That alcohol is not indicated in any diseased condition where some other remedy cannot be used to greater advantage, and that the consensus of opinion of the profession is that in the vast majority of cases where whiskey is used as a medicine it does nothing but harm."

With such a pronouncement on record it would seem that a physician who writes a prescription for whiskey is making himself liable under the law. It will be necessary for him to prove, if called upon, that the case for which he issued a prescription was an **exceptional** one.

We openly confess our opposition to the present stringent prohibition laws. They have, however, been enacted and hence must be obeyed—for the present, pending their appeal. We urge therefore that you go slow in writing liquor prescriptions lest some crab, crank or enemy ensnare you in a legal technicality and place the burden of proof upon you. The drier the oasis is made the sooner will a few irrigating rivulets be permitted to trickle in by legislative creation. Selah.

Now looms up an Illinois official who wants to institute a yearly registration of physicians for the sole reason of keeping tab on the doctors. If a few of these officials would get down to their offices and with their assistants and clerks work during office hours they might keep their records in such shape that they would not need to pass the buck and create a yearly re-registration scheme. If the Illinois physicians stand for such a law they will again enter class A as exhibits of easy marks.

Unless we mis-interpret some of the ripples on the surface, we are of the opinion that the profession has stood for about all the riding and imposition that has been heaped upon it. Sentiment is growing all over the country and will soon be converted into a concerted force of opposition that will resent and effectively resist added burdens. We look for some such action at the New Orleans meeting.

That is why we are urging and keep urging each county of our state to perfect their organization so that we will be able to register effective prestige and influence in the protection of our mutual interests.

This issue contains only the preliminary de-

tails for our annual meeting in Kalamazoo. The May issue will impart the complete program.

Hotel reservations should be made at once to avoid disappointment for from the reports that are coming in our prophesy of 1,000 attendance bids well to be fulfilled.

All the "boys" who were in the Service are planning to attend and participate in a re-union—sans cognac. Don't forget to make your hotel reservations.

Are you becoming familiar with the features of Compulsory Health Insurance? If not it behooves you to do so and at once. Literature is being sent to your county society officers and they too are expected to arrange an entire meeting for the discussion of the subject. This is the most important problem that confronts the profession and neglecting to participate in its solution will result in bringing upon you an impossible situation. We must defeat any attempt to thrust Compulsory Health Insurance upon Michigan. Will you aid?

Butterworth Hospital, Grand Rapids, has come out in favor of a two year training course for nurses. The Kent County Medical Society endorsed this plan. The Butterworth Training School has always graduated classes of well trained nurses who have been a credit to the school and many of them have been selected as department heads of other hospitals. We do not hesitate in stating the belief that with a two year's training the school's faculty will arrange a course of study that will maintain the high standing of its graduates. We believe the problem of scarcity of nurses will be solved if other state hospitals adopt a similar resolution.

You have all had a hard and heavy winter of work. You have put in long hours and fought many an inclination to plug the phone. Now that the brunt of the work is over we recommend that you make it a point to collect for the service rendered. Don't let your accounts drag along—send out your statements and demand their payment. People have money now and get yours before they spend it on new model cars.

How the other half is born challenges attention. Inaccessibility of medical and nursing aid, according to studies of maternity care in 6 rural areas of 4 states made by the Children's Bureau

of the U. S. Department of Labor, is responsible for much suffering and even death.

In a northwestern county and in a southwestern county there were nearly twice as many persons per physician as the average for the United States; in a southern mountain county there were four times as many. A vast area in the far northwest, larger than the State of Connecticut, was served by three registered doctors. Moreover, most of the doctors in every rural county were located at the county seat, while the remoter parts of the county were entirely without medical service.

More than one-third of the families in the far northwestern county studied were 20 miles or more from the nearest doctor, 10 being from 50 to 100 miles away. In a southern county more than one-fourth of the families were 10 miles or more from a doctor, and in another county 25 miles was not an uncommon distance.

Actual miles were not the sole obstacle to obtaining medical help at confinement. Rough roads, crossed by rivers; slippery mountain trails, almost impassible at best, become totally so under bad weather conditions. As a result doctors arrive from several minutes to 24 hours too late to deliver their patients. Many families, discouraged by repeated failures to get a doctor in time, are tempted to do without one altogether; to others the thought of a doctor does not occur unless the patient's condition becomes critical.

In a southern county only 68 out 160 mothers had a doctor at their last confinement; in only 8 out of 66 confinement cases in a northern county was a physician secured; and in still another more than two-thirds of the women did not have a physician when their babies were born. Three were entirely alone, and 46 had only their husbands in attendance.

Women would in many cases leave home for confinement if hospitals were within reach. But one 5,500 mile area had no hospital; neither had the southern mountain county. Reaching a hospital meant a journey of several days by wagon trail, or one by stage across the roughest of mountain roads.

In a large number of cases the mother has no nursing care except that given by an untrained hired girl, a relative, or a neighbor. Figures gathered from five rural counties are small in number but appalling in significance: 45 out of 89 babies; 22 out of 28; 12 out of 15; 10 out of 16; 10 out of 14 babies died **before they were a month old.**

These figures are further corroborated by the

Bureau of the Census which gives the increase in infant mortality rates from premature birth and injuries at birth. The first has increased from 17.5 in 1910 to 21.1 in 1917, and the other from 3.2 in 1910 to 4.6 in 1917. These excessive rates are due to the condition of the mother and indicate plainly that motherhood is not receiving the protection it needs. As the Census report itself says: these increases "should serve as food for thought."

Correspondence

Editor Michigan State Medical Journal,
Grand Rapids, Michigan.

Two bags of instruments, dressings, etc, and a small mahogany clock, were stolen from my office three weeks ago. I have recovered one of the bags with many instruments but they are not mine. It seems somebody is gathering these for resale. I would suggest if second-hand instruments are offered to any M. D. for sale, **regardless of the story told**, to be too busy to pass judgment at that time, but to return in an hour or two and, **retaining the instruments**, in the meantime call an officer. All this, of course, to be modified according to circumstances. Perhaps a central reporting place for all instruments found and lost.

The owner of the instruments I have can have same by calling at my office.

Yours truly,

Williard Monfort.

It has been observed, since early medical days, that epileptic persons have a diminished number of seizures during an attack of typhoid fever, pneumonia, scarlet fever, or other acute diseases characterized by elevation of temperature. This fact was particularly noticeable during the recent epidemic of influenza at the Michigan Farm Colony for Epileptics. With over five hundred patients there occurred sixty-two cases of influenza. During the course of this illness these sixty-two patients totaled twenty-three epileptic convulsions. A very conservative estimate of the number of seizures that might have been expected from these patients during that period is one hundred fifty-seven.

Of the sixty-two cases, sixteen developed broncho-pneumonia, of whom eleven died. Four died from influenza without pulmonary complications. The death rate was, relatively, especially high among the group of patients who were

of very low status physically and mentally, as evidenced by forty-two cases with thirteen deaths in Cottage Number One as against twenty cases with two deaths in Cottage Number Three.

Robert L. Dixon.

February 25, 1920.

The Editor,
Journal, Mich. State Medical Society,
515 Powers Theatre Bldg.,
Grand Rapids, Mich.

Dear Sir:

If possible, will you consider the publication of the following letter, or so much of it as you deem suitable for your journal:

"To all physicians who served the Federal Government during the war:

An association of Medical Veterans of the World War was organized at Atlantic City, in June, 1919, at the time of the meeting of the American Medical Association, and a constitution and by-laws adopted. About 2800 physicians have already joined and all others who are eligible are invited to join the society.

The constitution states that 'The Dominant Purpose of this Association Shall be Patriotic Service. The objects of this association shall be: To prepare and preserve historical data concerning the medical history of the war; to cement the bonds of friendship formed in the service; to perpetuate the memory of our medical comrades who made the supreme sacrifice in this war; to provide opportunity for social intercourse and mutual improvement among its members; to do all in our power to make effective in civil life the medical lessons of the war, both for the betterment of the public health and in order that preparedness of the medical profession for possible war may be assured.'

The organization of the society provides for state and local organizations wherever the members desire it, and in some states, such as Wisconsin, organization has already been effected.

It is desired by the National association that those who are already members meet together in larger and smaller groups, at the first convenient opportunity and effect a local organization with a chairman and secretary, and also at the next meeting of the state medical society that a place be provided on the program for the Medical Veterans.

The organization of the society is based on democratic principles and it is hoped that the members who have already joined will take the initiative and organize their own state and local societies.

The national organization will assist by furnishing application blanks and copies of the constitution and by-laws, and, if desired, stationery.

The first things to be done after the organization of a state society is effected is to elect a councillor to the general council of the organization, to represent the state society at the next annual meeting of the veterans at New Orleans on the first day of the meeting of the American Medical Association, April 26, 1920.

A badge or button for members of the society is being made and will soon be ready for distribution."

Yours very sincerely,

F. F. Russell, Secretary.

March 8, 1920.

Dr. F. C. Warnshuis,

Secretary Mich. State Medical Society.

Dear Sir:

Dr. R. M. Howell while secretary of this society was directed to write you informing you of a resolution adopted at the February meeting stating this society's attitude toward lodge practice, etc., and automatically discontinuing the membership of those who continued in such practice. At the March meeting this resolution was declared unconstitutional by the society and proceedings relative to the resolution were ordered stricken from the minutes.

Respectfully yours

W. R. McKinnon, Sec'y.

Deaths

Doctor E. A. DeCamp, of Flint, died March 7, at his home after an illness of several months.

Doctor DeCamp is a graduate of the Detroit Medical College of the class 1900. He is survived by the widow and three children.

State News Notes

COLLECTIONS.

Physicians' Bills and Hospital Accounts collected anywhere in Michigan. H. C. VanAken, Lawyer, 309 Post Building, Battle Creek, Michigan. Reference any Bank in Battle Creek.

General practice, hustling village, rich farming community. Ionia County. Collections over \$7,000 last year. Office and contents for sale. Electric lights. City water. Care Journal.

General practice and drugs, unopposed village

practice and only one drug store, rich farming community, good schools, roads, and churches. Collections in 1919 over \$9,000.00. Monroe County, Edison lights, Rexall Agency. Contents of drug store for sale. Care Journal.

Physician Wanted—best town and location in the State. Office furniture for sale. Write physician, care Journal.

AMERICAN MEDICAL EDITORS' ASSOCIATION.

The fifty-first annual meeting of the American Medical Editors' Association will be held at the Grunewald Hotel, New Orleans, La., on Monday and Tuesday, April 26th and 27th, (during the week of the A. M. A. convention) under the presidency of Dr. Seale Harris, editor of the Southern Medical Journal.

A most interesting program has been arranged and every doctor, even remotely interested in medical journalism, will find it to his advantage to attend.

It is advisable for you to make early reservation of rooms to assure you of accommodations.

AT THE NEW ORLEANS MEETING.

Motion pictures showing the surgical uses of Dichloramine-T will be displayed at the April A. M. A. meeting at New Orleans, by the Abbott Laboratories, of Chicago. All physicians attending this meeting are cordially invited to see these and other interesting pictures of recent medical and surgical procedures.

The following is a characteristic announcement of the Alpena County Society meetings. We pass it on to County Secretaries for their inspiration:

Alpena, Mich., March 11, 1920.

Dr. Archie McKinnon,
Atlanta, Mich.

Dear Doctor:

The regular meeting of the Alpena Medical Society will be held Thursday, March 18th at 6 P. M. at the Alpene House. Doctors Dunlop, Bertram, Foley and Secrist, Jr., are the hosts, so bring your appetite with you. You know the Bonneville banquet? Well Bertram is on the committee. Enough said.

The program is in the nature of a symposium on syphilis. Dr. Arscott is chairman and will

maintain order. Dr. Williams will tell some of the things he does not know about diagnosis, and Dr. McKnight, how to cure the blamed thing when you have got it named.

Ask Dr. Secrist about the long distance treatment of pneumonia. Dr. Bell holds the record. Using whisky Doctor?

Yours truly,

The Sec.

The following Michigan physicians were elected to fellowship in the American College of Physicians at the annual convention in Chicago: Doctors A. J. Baker, Grand Rapids; James Cleland, Jr., Detroit; B. R. Corbus, Grand Rapids; A. W. Crane, Kalamazoo; James H. Dempster, Detroit; A. S. DeWitt, Detroit; Charles W. Hitchcock, Detroit; Neal L. Hoskins, Detroit; W. J. Kay, Lapeer; D. M. King, Detroit; Theophilus Klingman, Ann Arbor; George E. McKean, Detroit; M. A. Mortensen, Battle Creek; E. W. Mooney, Detroit; Mark Marshall, Ann Arbor; William Northrup, Grand Rapids; J. S. Pritchard, Battle Creek; Isaac L. Potozker, Detroit; H. M. Rich, Detroit; C. E. Stewart, Battle Creek; H. R. Varney, Detroit; W. J. Wilson, Jr., Detroit; H. L. Ulbrich, Detroit; E. H. Sichler, Detroit; F. R. Starkey, Detroit, and L. F. C. Wendt, Detroit.

Big Rapids physicians have secured temporary quarters for their hospital and anticipate the

carrying of a bonding proposition for the erection of a new county hospital this fall.

We urge all Michigan men in attendance at the New Orleans meeting of the A. M. A. to promptly register. We hope to publish the names of all Michigan attendants in our next issue.

D. Emmett Welsh, Jr., son of Dr. D. Emmett Welsh of Grand Rapids, has successfully passed his admittance examinations to Annapolis Naval Academy.

Holland is feeling the need of increased hospital facilities. The city council is considering the erection of a new fifty bed building.

Dr. Herbert L. Wright, city health director of Lansing, has tendered his resignation and accepted a similar position at Austin, Texas.

Monroe is considering ways and means for the erection of a city hospital.

If your May Journal doesn't arrive we suggest to you that you pay your 1920 dues.

Yes, paper went up this month and so did Journal expense.

Butterworth hospital, Grand Rapids, has established a two year nurses' training course.

COUNTY SOCIETY NEWS

It is the Editor's desire to have this department of the Journal contain the report of every meeting that is held by a Local Society. Secretaries are urged to send in these reports promptly

DELTA COUNTY

The annual meeting of the Delta County Medical Society was held at St. Francis Hospital, on the evening of December 18, 1919.

After the banquet the business meeting of the Society was held, Dr. F. Summerbell presiding.

The annual report of the secretary-treasurer was read and accepted.

Dr. C. Girard gave a reminiscent talk of the early days in this vicinity. It was replete with thrilling incidents of the last forty years.

Dr. A. F. Snyder gave a short talk calling attention to the complete facilities of the laboratory conducted by St. Francis Hospital.

Dr. F. Summerbell, the president, delivered an

address, pointing the way for a better and more united society.

The following officers were elected for the ensuing year, 1920:

President—J. J. Walch, Escanaba.

Vice President—L. P. Treiber, Bark River.

Secretary-Treasurer—G. W. Moll, Escanaba.

Delegate to State Meeting—Ferris Summerbell, Nahma.

Alternate—J. F. Defnet, Escanaba.

Med. Leg. Advisor—D. N. McKee, Gladstone.

Trustee—G. M. Bjorkman, Gladstone.

GENESEE COUNTY

The Genesee County Medical Society met on Wednesday, March 17th, President Randall in

the chair. After some discussion on Compulsory Health Insurance, a committee, consisting of Drs. Bower, Burnell and Winchester, was appointed to prepare a report, which will be the basis of a discussion at a future meeting. The Society will assist in entertaining Gen. Wood during his visit to Flint.

Dr. Mark Marshall of Ann Arbor read a most scholarly paper on "Epigastric Pain in Relation to Intra-Abdominal Disease." A spirited discussion followed and our members should be able to undertake the investigation of this symptom much more intelligently.

Dr. Geo. K. Pratt, of Flint, who had a varied Neuro-Psychiatric in the late war, read a most excellent paper on "Certain Aspects of Hysteria." He illustrated the protean character of the disease by many instructive case histories. Papers like this will educate the physicians to recognize this neurosis and by scientific Psycho-Therapy to keep their patients out of the hands of quacks and Christian Scientists.

The Genesee County Medical Society met for noon luncheon on Wednesday, February 18, 1920, President Randall in the chair.

Dr. F. C. Warnshuis of Grand Rapids read a most excellent and timely paper on "Our Present Attitude to Surgery of the Breast."

A good discussion followed.

Prof. A. S. Warthin of Ann Arbor gave a masterly address on "Cardio-Vascular Syphilis."

On Wednesday, March 3rd, the Society had for its guest, Prof. W. S. Hall of the Northwestern University Medical School, Chicago. He spoke on "The Educational Phase of Venereal Disease Control."

After due consideration, it was recommended that day calls be \$3 and night calls \$5.

W. H. Marshall, Sec'y.

OTTAWA COUNTY.

Report on Ottawa County Medical Society meeting, March 9.

Ottawa County is in the midst of an agitation for a county tuberculosis sanitarium. A bond issue for \$80,000 for this project will be voted on at the spring election. The County Medical Society at its last meeting took up the matter as its program. A thorough discussion of the subject was elicited. And with the assistance of Dr. E. R. VanderSlice of Lansing, and Dr. Wm. DeKleine of Flint, a good deal of light was thrown upon the project and a large amount of enthusiasm injected into the discussion. The

society decided by a unanimous vote, to get back of and support the campaign for securing a sanitarium for Ottawa County.

"Compulsory Health Insurance" also came up for attention and, owing to its importance as well as the need of further information on the subject, felt by the membership, this topic will be taken up as a part of our regular program at our next meeting in April.

The enthusiasm and spirit manifested in our meetings promises well for the growth and effective work of our County organization.

The membership list now includes three-fourths of all practitioners of the County and we propose to increase this percentage by another drive this spring.

A. Leenhout, Sec'y.

Book Reviews

THE AMERICAN ILLUSTRATED MEDICAL DICTIONARY. W. A. N. Dorland, A.M., M.D. Tenth Edition, revised and enlarged. W. B. Saunders Co., Philadelphia.

With several hundred new terms and definitions, and with added historical data regarding medical terms this tenth revision increases the value of this work that has long been a standard authority.

We urge the securing of this tenth edition for no one can progress without it as a reference on his desk. We know for we use it several times a day and would not be without it.

THE MEDICAL CLINICS OF NORTH AMERICA. Volume III Number IV (The Boston Number, January, 1920). Octavo of 316 pages, 43 illustrations. Philadelphia and London: W. B. Saunders Company, 1920. Published Bi-Monthly. Price per Clinic year; Paper, \$12.00; Cloth, \$16.00.

A splendid collection of cases, medical in nature, presented and discussed by Boston internists. One reads with much profit the presentation, course, treatment and discussion of the medical cases presented in this series by some of our foremost internists.

THE SURGICAL CLINICS OF CHICAGO. Volume IV Number I (February, 1920). Octavo of 231 pages, 83 illustrations. Philadelphia and London: W. B. Saunders Company, 1920. Published Bi Monthly: Price per year: Paper, \$12.00; Cloth, \$16.00.

From time to time we have noted in these columns the contents of this publication as it has appeared during the past four years. Starting as they did from Murphy's Clinics, the original plan has been altered so that now the Clinical

Cases reported include those of a score of well recognized Chicago surgeons. Thus one receives not only the methods and technic of one operator but of fifteen to twenty in each issue.

We have always held that a study of our clinical cases broadens and increases one's professional ability. In addition if we study the clinical cases and experiences of others we profit doubly. This first number of volume four is filled with interestingly instructive clinical reports. Not rare, or unusual case but those which we all encounter daily. The volume is worth far in advance its monetary price. We recommend it and the series to our readers.

Miscellany

From Tom Killian, Publicity Department, Leonard Wood National Campaign Committee.

The hopes of the medical profession for a department of public health with a representative in the president's cabinet, towards which end the physicians and surgeons of this country have been working for years, will be realized if Leonard Wood, republican aspirant for the presidential nomination is elected president. In a speech recently before a body of physicians and surgeons at Battle Creek, General Wood advocated the establishment of such a department with a medical man at its head as a member of the cabinet.

"What we need in this country," said General Wood, "is a sound national department of public health, a health bureau with a medical man at the head of it as a member of the cabinet. It doesn't make any difference who establishes it. It is a thing that is bound to be done. Our public health service is now scattered through a dozen different departments under as many different heads. What we need is one centralized department, nation wide in scope, to take care of all national problems of health and sanitation.

"The average layman doesn't realize what great advances have been made in the medical profession in the past few years. I do not suppose in any war in history, medicine and surgery have done as much as they have in the late

war. We have maintained millions of men under conditions which fifty years ago would have meant absolute and certain death. Men living in the trenches and under ground, in the mud and muck, the ground polluted by all those things which come from varying thousands of men, and thousands upon thousands living there for months, polluted in spite of all you could do, have been brought out healthy, strong and wonderfully sturdy looking troops. That was the work of the medical profession, and through this war you have added to the sum total of human work of a beneficent character, more perhaps than has been added in many, many years before. You have learned how to control disease and to accomplish things.

"You can do a great deal under the dramatic stimulus of war, just as we did in Cuba. There we had to rid the army of yellow fever and so great was the pressure that we were justified in trying out our theories upon human beings who volunteered, and fortunately only one or two of them died. Out of that, however, came the control of yellow fever and the control of malaria. The British had given us the first experimental work in that direction and then came the work of that wonderful American commission, Walter Reed, Lazear and Carroll on yellow fever and its control. That commission saved us more lives and money every year than the war cost and it is a possession which is everlasting. It has aided in making the tropics safe for white people for all time.

"Then again we took hold of the Panama Canal, and it was built on the sanitary foundation laid in Cuba. The work of Walter Reed and his associates in Cuba made the work of Goethals and his associates in Panama possible. Delesseps and his French associates were just as good engineers as we were; they were quite as resourceful and just as brave. We have no monopoly on any of those qualities, but they could not build the canal because they could not stand the terrific death rate. General Goethals, the engineer, went hand in hand with General Gorgas, the sanitary expert, who had had his training in Cuba, and there laid, as I said, the foundation on which the Panama Canal was built.

"The sanitary methods of the medical profession have worked tremendous benefits for humanity. In fact, it was the work of medical men in very large part which made it possible to maintain a fighting force on the lines."

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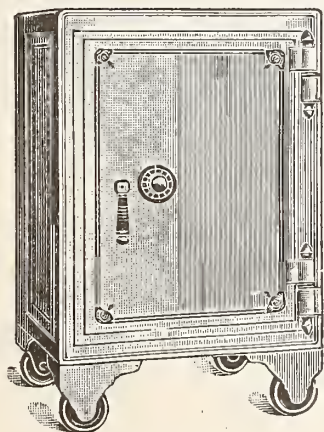
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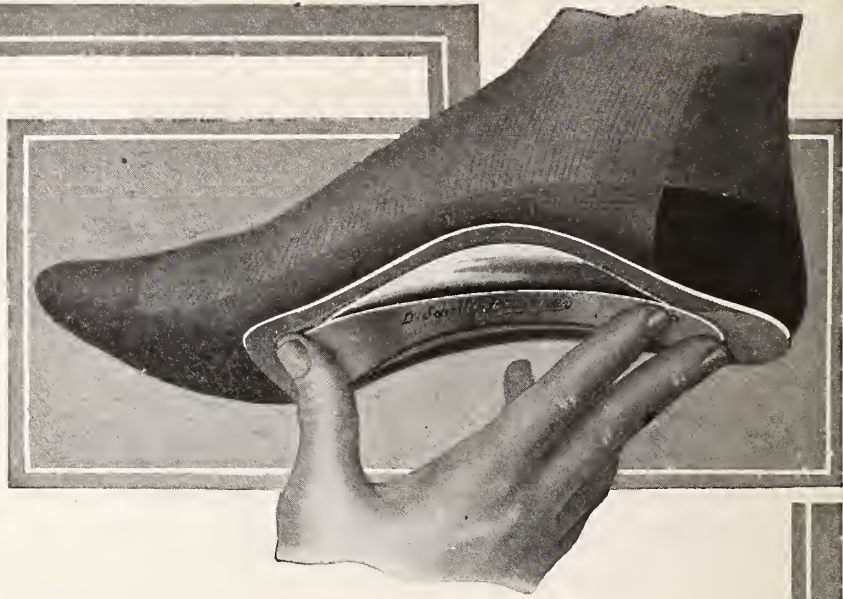
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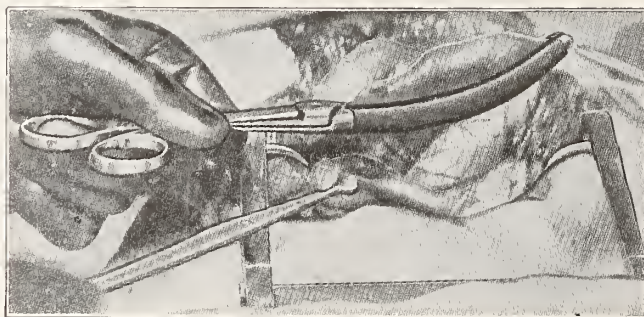
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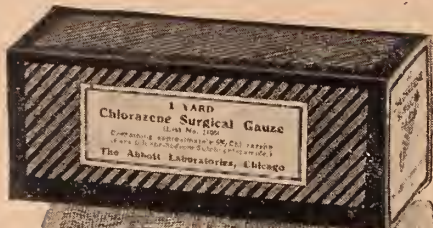
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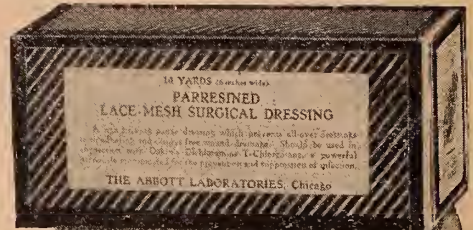
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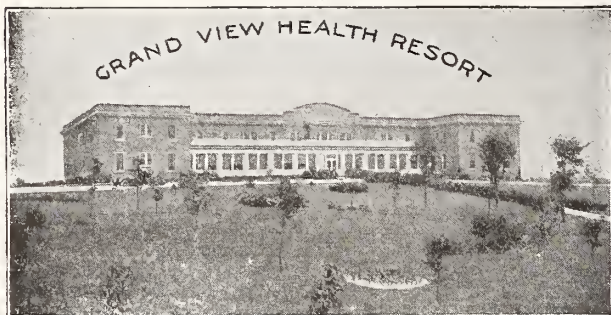
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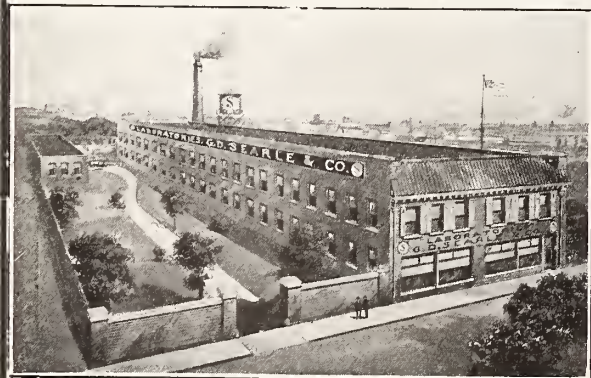


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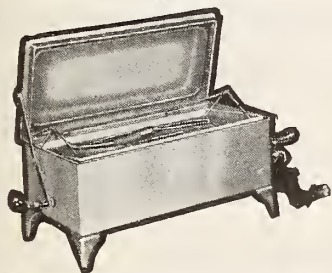
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No. 5

Original Articles

NOTES ON URETERAL STONE.

G. KOLISCHER, M.D.,

Urologist to the Michael Reese Hospital, and Mount Sinai Hospital, of Chicago.

J. S. EISENSTAEDT, M.D.

Associate Urologist to the Michael Reese Hospital.
CHICAGO, ILL.

The attitude of surgeons concerning the treatment of ureteral concretions has changed repeatedly dependent on the various periods in the development of urology. While formerly the diagnosis of ureteral stone was based merely on a more or less accurate clinical guess or was made incidentally at autopsy, the addition of X-ray photography and ureteral catheterization to our technical equipment served to direct diagnosis and therapy into more definite lines. As in other instances the development of therapeutic measures antedated the construction of elaborate and precise diagnostic methods.

In instances of a tentative diagnosis only, twenty-five years ago ureteral stones were dislodged and brought down into the bladder by injecting liquid vaseline into the ureter through a ureteral catheter (Kolischer), while some time later it was shown that occasionally the presence of a ureteral concretion may be demonstrated by the contact with a metallic ureteral sound. (Casper, Kolischer). Then followed the introduction of the wax tipped ureteral catheter, scratches on its waxy cap being construed as having been produced by a ureteral concretion. (Kelly). Roentgenography furnished the possibility of diagnosing ureteral concretions by supplementing the clinical history. It soon was found that the mere appearance of skiographic shadows in the ureteral region did not prove the presence of ureteral stones, in fact, that they may lead to serious errors in interpretation.

When the diagnosis of ureteral stones was placed on a firm basis by the introduction of the shadowgraph catheter (Kolischer, Schmidt)

and additional aid was furnished by the precipitation of collargol on the concretion (Kuemmel) and by the inflation of the ureter with oxygen (Goetze) the ability to make an exact diagnosis led to a too liberal employment of cutting operations.

A reaction set in after it was impressed on the medical world that the great majority of ureteral stones would pass spontaneously (Leonard) and after cystoscopy and ureteral catheterization with their therapeutic possibilities became more thoroughly appreciated.

It is surprising to observe that even very large stones having rough surfaces may be expelled by ureteral contractions. Occasionally lacerations of the ureteral mouth may be observed cystoscopically, after a concretion has been forced through it by the expelling power of the ureteral wall. Of special interest are concretions that become impacted either in the upper third of the ureter or in the intramural (intravesical) part of this tube.

As to the first group—it is a matter of experience that ureterotomy done anywhere in the continuity of this organ is an interference of major dignity and uncertain outcome. The exposure and denuding of the ureter to any considerable extent may lead to partial necrosis and many serious sequelae—a persistent ureteral fistula is one of the most unfortunate ones. Adhesions may form around the part of the ureter operated upon, which lead to kinking of the ureter in various degrees and subsequent interference with, or to the total loss of renal function. Therefore, if a concretion impacted in the upper third should be the cause of surgical intervention, it is preferable to remove this stone by pyelotomy. The renal pelvis is exposed, the stone is milked back by finger pressure into it without stripping the ureter and the concretion is removed by opening the renal pelvis. A properly conducted pyelotomy is a safe procedure and does not lead to any impairment of the renal function.

Stones impacted in the intravesical part of the ureter are not suitable for surgical approach from without the bladder. The ex-

posure of the ureter at its entrance into the bladder wall is an extensive operation and the technical difficulties are increased by the copious hemorrhage which always accompanies the exposure of the ureter at this location and which is exceedingly difficult to control.

For the removal of such concretions two endovesical methods are available; one without opening the bladder, by the employment of the operating cystoscope, the other suprapubic cystotomy and extraction of the stone after the interior of the bladder and the ureteral mouth are made readily accessible.

Liberating such a concretion through the cystoscope is accomplished by either dilating the ureteral ostium by means of an alligator forceps and injection of a lubricant, or widening the ureteral mouth by incising it by means of fine scissors or a slender galvanocautery introduced through the conducting channel of the operating cystoscope.

If necessary, extraction is accomplished with a fine forceps inserted in the same way. The cystoscopic method may be tried in all cases in which part of the stone is already seen to protrude from the ureteral mouth or in those instances in which the concretion is not caught in the mucosa (on account of a cross position), and if there is no pronounced inflammatory reaction in the involved area.

But it is just those cases of immovable impaction of a stone associated with marked inflammatory reaction in which there arises the indication for prompt removal of the concretion.

Cystoscopic endovesical manipulations in such cases are not advisable for the following reasons. The mucosa around the ureteral opening is very hyperemic and vulnerable to a high degree. Any manipulation traumatizing it will immediately cause profuse hemorrhage. This obscures the cystoscopic view to such an extent that the necessary steps can no longer be carried out under the guidance of the eye.

Inflammatory reaction evidences itself by redness of the vesical mucosa over the area concerned, by the appearance of wrinkly folds which cover the intravesical part of the ureter, and in a pronounced protrusion into the bladder of this area. The region of the ureteral end assumes the appearance of an inflamed nipple or of a red raspberry.

In all cases of this kind it is preferable to open the bladder by suprapubic incision and expose the trigonum to direct approach. The ureteral opening is then incised to the extent

desired and the concretion extracted with a fine forceps. It is unnecessary to suture the slit in the orifice after removal of the stone—healing proceeds favorably without it and in this way there is also eliminated the likelihood of the formation of phosphatic deposits.

In case considerable oozing should occur, it is checked by touching the bleeding edges with the galvanocautery.

After the ureteral operation is completed, the bladder is sewed up without drainage and the fascia and skin closed over it.

Correct suturing of the bladder and reliable subfascial drainage will insure primary union so that the healing process is completed in from seven to nine days.

It may not be amiss to mention a few diagnostic details concerning ureteral concretions impacted in the intramural part of the ureter. The proof of the presence of a stone in this locality is furnished by the X-ray plate and by direct cystoscopic observation. The control by a shadowgraph-catheter will identify a shadow in the pelvis as due to an endoureteral concretion. If, on account of the swelling of the ureteral mucosa the introduction of a ureteral catheter is impossible, another method should be employed to determine the origin of the shadow. If a shadow suspected of corresponding with a ureteral stone is noted, a second picture is taken with the bladder distended with oxygen. If now the shadow in question falls within the oxygen field it may be considered as being due to a foreign body within the bladder wall.

Cystoscopic examination will furnish further diagnostic details.

If a part of the stone protrudes from the ureteral mouth it may easily be identified by sight and touch.

If the concretion is embedded in the intramural part of the ureter without partial exposure into the vesical cavity two characteristic phenomena will be observed.

The ureteral orifice forms a well defined prominence into the viscus. This elevation stands out in bold relief. If the cystoscopic lamp is pushed far back into the fundus of the bladder, so that transillumination of the ureteral end results, the stone will appear as a very dark shadow in the center of a red field which represents the distal ureteral end.

In cases of extreme reaction the ureteral mucosa is seen to prolapse from the ureteral mouth. Rhythmic variation in size is noted with each expulsion of the urinary jet.

Intense edema will loosen the ureteral

mucosa from its underlying structures to such an extent that it becomes freely movable and appears covering the ureteral mouth as a glistening whitish globe, which may be mistaken for a ureteral cyst. From the latter it may be differentiated by the emanation of the urinary whirl from its center and by its increase in size under the propelling force of the urinary ejaculation, and its recession during the period of inactivity of the ureter.

MEDICAL SERVICE IN THE COMMUNITY HOSPITAL.

J. G. R. MANWARING

FLINT, MICH.

In the previous discussion we took up the purposes of the Community hospital, some of the conditions to be met and some of the principles guiding us in organizing and running such an institution. Now it is proposed to discuss this organization and running in the medical and surgical departments without undue violation of the principles laid down.

The form of organization may well be:

1. An attending staff.
2. A medical board.
3. Service committees.

THE ATTENDING STAFF.

The members of the attending staff are to be appointed by the hospital directors upon the recommendation of the medical board.

The medical board shall recommend for the attending staff *all* physicians of the community who are licensed by the state to practice medicine and surgery and who are in good standing.

The members of the staff shall have equal rights and privileges in the care of the patients in the hospital.

All patients in the hospital must be attended by a member of the staff or in conjunction with such a member.

The members of the staff shall serve so long as they are in active practice in the community and conform to the hospital rules.

A member may be dropped from the staff by the hospital directors when he knowingly and repeatedly violates the regulations for staff members or when he becomes of disrepute.

Literally this makes a "closed" hospital but not in the customary usage of the term for every physician has open to him the privilege of using the hospital for his patients. He becomes a staff member almost automatically if he practices in the community.

There comes the question as to why we should designate such a staff at all instead of letting anyone practice in the hospital who wishes to.

This naming of staff makes it easier to exclude certain practitioners who are found everywhere and who may want to use the hospital without the proper preparation for it and who may readily abuse its privileges. These would include the representatives of the various cults, advertising quacks, itinerant casuals and strangers of unknown qualifications.

These should be excluded, not necessarily because they will not do good work, but because their ideals and ideas are unknown or so at variance with those of the majority of physicians that they should not be asked to work together.

The simplest and best control by the hospital administrative forces is to be obtained in this way. If a member, who is appointed and has a fair chance, persistently fails to live up to the requirements of the place he can be dropped from the staff membership. This can and should take place without the intervention of another physician with its evils.

The attending staff is not to be divided into service groups. The special fields can be directed in another way almost if not quite as well without such classification. This will avoid the feelings aroused by the selection of men to make up the special staffs.

THE MEDICAL BOARD.

The directors shall appoint a medical board from the attending staff members of such number and character that the various specialties will be represented. The number of course will depend somewhat on circumstances but as the board takes the place of the service staffs it should be representative and could well have from 1 to 4 men of the various lines of practice here given: general medicine, internal medicine, general surgery, obstetrics, neuro-psychiatry, pediatrics, industrial surgery and laboratories. A board should function well with from 10 to 20 members. If too few, a suspicion of clique rule will be aroused and what is gained in expedition is lost in support.

The term of service of members of the board should not be too short, 5 to 10 years is suggested. The nature of their duties requires that time be given to develop their greatest usefulness. Any member of the board may be removed after a hearing by the board of directors. If dropped from the attending staff a board member is automatically removed from the board.

The duties of the medical board shall be to formulate rules and regulations covering the general medical and surgical care of patients in the hospital, the standardization of methods,

the professional relations of physicians, patients and hospital personnel and such other matters as are of professional nature and are proper matters for hospital regulation.

The medical board shall advise the hospital directors as to any recommendations it may have regarding any of the hospital work.

Such rules and regulations as are thought advisable by the medical board are to be submitted to the hospital directors for approval by the administrative forces of the hospital.

The medical board shall nominate and present to the hospital directors the names of all physicians proposed as members of the staff.

ORGANIZATION OF THE MEDICAL BOARD.

The board shall appoint one of its members as chairman. He shall call all its meetings and preside over them. He shall convey to the medical board information and instructions from the board of directors and likewise shall present to them recommendations from the medical board.

From its own members the board shall appoint special committees who shall, so far as possible, be made up of specialists in the line of work the committees are to handle. These committees should be known as the surgical committee, medical committee, pediatric committee, laboratory committee, etc. The committees should study and develop the details of the work of the various branches of practice in the hospital for the benefit of the board in carrying out its duties. They should confer with interested members of the staff and work in harmony with them.

This organization takes the place of the usual executive staff, service staffs, staff chiefs, etc. It will avoid enmities and difficulties if the terms "staff," "chief of staff" etc. are not used. "Medical board" service committee" "committee chairman" etc., are non-committal terms, inasmuch as they do not advertise individuals as having especial skill worthy of especial rewards nor do they by implication advertise those not having them as less worthy.

CERTAIN ASPECTS OF HYSTERIA.*

GEORGE K. PRATT, M.D.

OAK GROVE HOSPITAL.

FLINT, MICHIGAN.

In the modern practice of medicine there is not one, be he specialist, surgeon or general practitioner, who has not been confronted by the regrettable fact that an increasing number of patients present themselves for the relief

of symptoms that fail to point definitely to pathologic states.

And if he be observant he likewise has been confronted by the deplorable fact that the number of automobiles parked before the Eddyite temples grows larger each Sunday.

Thirdly, if he be of a philosophic turn of mind he may suspect that, like Brutus, "the fault lies not in the stars" but in himself, and that failure to relieve the condition has contributed to the clientele of the "Healer."

Why is this true?

First of all because emotional instability, with its multiplicity of symptoms is increasing. The tension and high pressure incident to living make extraordinary demands upon nervous energy. So-called "Big Business" requires of its devotees extreme concentration and endurance. Efficiency and speeding-up have become industrial by-words but who pauses to consider what their achievement costs in mental health?

One can scarcely conceive of more favorable conditions for the development of psychasthenic states than those involved in the present day struggle for existence. In times of national unrest and threatened disaster the span of life diminishes and maladies of the mind thrive best.

As to the second question, why the visit to the "Healer"? the answer is not difficult. Until a few years ago the subject of nervous and mental diseases in most medical schools was accorded no greater importance in the curriculum than hydrotherapy or dermatology. The subject was not made interesting; most regarded it as dry and unprofitable, and the attitude towards the neurologist was that of toleration for one who could waste time on such an unimportant topic. Indeed to-day, few physicians are reluctant to admit non-acquaintance with the neuroses.

It is not so very long ago that, following a paper on the subject of the neuroses at a large inter-state meeting, the technical discussion waxed fast and furious. Finally a grizzled old veteran of the profession arose and threw a bomb into the audience with this remark, "You men who talk of psycho-analysis and dissociation and all that, may know what it is all about, but as for me, when I get a fool woman who thinks she has every disease in the almanac, I don't attempt to fuss with her. I send her down the street to the Christian Scientist."

And that is exactly what a lot of us are unwittingly doing, by failing to recognize that the patient's ways of thinking need correction before the physical complaint may be remedied.

*Read before the Genesee County Medical Society, March 17, 1920.

Under the broad classification of "Psychoneuroses" there are a number of sub-headings including Neurasthenia, Psychasthenia, Hysteria and others. Because the latter condition most often presents marked physical as well as psychical manifestations and because it is, perhaps, the most spectacular of the group, I have chosen it for discussion. In the scope of a brief paper one may touch on fundamental conceptions of the disease only.

Hysteria in one form or another has been known since the time of Plato and Galienus. They ascribed its bizarre and grotesque manifestations to demoniacal possession and this conception existed for centuries. In the Middle Ages hysterical persons were burned as witches. Their seizures were attributed to demons and any area of anaesthesia when probed by the witch prickers was called "Stigmatum Diabolicum" or Devil's Claw from its supposed shape. While other branches of medicine received much attention from time to time, it was not until about 1840 that hysteria was accorded even scant medical recognition. Tremendous impetus has been given its recent study by the tragical conditions found among the troops in the World War, and the interpretation of so-called "shell-shock."

Like syphilis, hysteria is so protean in its manifestations that any complete description of symptomatology is impossible. However there is a group of phenomena whose presence is suggestive.

Classified as to relative frequency there are the following states:

1. Seizures or "fits."
2. Paralyzes.
3. Contractures.
4. Aphonias and mutisms.
5. Blindness and deafness.

Another group of miscellaneous activities includes somnambulism or "sleep-walking;" many of the amnesias (usually retrograde) or "losses of memory;" and various tics or habit spasms. These latter are often regarded as compensatory or substitution phenomena. Any or all of these conditions may be, and often are, accompanied by disturbances of sensation known as hysterical anaesthesia or "stocking" or "glove" anaesthesia from the sharply demarcated boundaries.

Taking up these manifestations in the order submitted, I shall first discuss hysterical seizures.

SEIZURES.

Group 1. These are the most common of all hysterical symptoms. Usually they are so self-evident that little skill in differentiation is re-

quired. However, they sometimes resemble epileptic seizures so closely that the diagnosis is anything but simple. As a rule in a hysterical condition during the convulsion the patient's movements have some purpose, though apparently eccentric. One may fall to the ground but seldom if ever injures himself. An epileptic may, and often does, bite his tongue and lose control over the sphincters. A hysteric may bite his *lip* but never, except accidentally, the tongue. Conduct after the attack may be of help in the diagnosis. An epileptic is usually stuporous and exhausted following a seizure, while the hysteric frequently goes about his business as usual. Once a diagnosis is established during an attack, the treatment of hysteria is simple. Isolate the patient and assume an air of indifference. This is the mental cold douche comparable with the pail of cold water which has at times been employed, but which, while possibly effective is rarely expedient.

PARALYSES.

Case 2. A young man, aged 24, and coming of a neurotic family was arrested on a technical charge of rape and remained for four months in the county jail awaiting trial. For a time he bore confinement well, but as trial was postponed he chafed and found it irksome. One night during an emotional revival meeting conducted by the Salvation Army he knelt in prayer with others and on arising felt tingling and pain in the right leg. A moment later he fainted and regained consciousness in the hospital several hours afterwards.

His right leg was paralyzed from the hip down and he found it necessary to walk with crutches, dragging the useless extremity. A few days later the nurse reported that he was undergoing seizures of a strange type.

Hysterical paralyzes never affect a single muscle as a true organic lesion often does. It is always, with the hysteric, a mass paralysis involving a functioning group. The paralysis which this patient displayed was exaggerated in contradistinction to that observed in organic cases. In walking the patient dragged the leg, making no attempt to use it whatever. To his mind it no longer existed and he had effected what is known as a "mental amputation."

In organic paralysis the patient is apt to make some effort to use the affected leg or tries to push the foot ahead. Another valuable differential aid is the determination of atrophy. Unless extended over a period of several months the hysterical paralysis shows no atrophy. There is absence in hysterical cases of the "reaction of degeneration" accompanying certain organic

lesions. This may be determined by the use of a fardic or galvanic coil.

The reflexes, except for the tendon group are usually intact in hysteria. The patellar jerk however, as in the case under discussion, may be grotesquely exaggerated as well as the Achilles reflex in the ankle. Ankle clonus, indicative of pyramidal tract involvement is not found in hysteria.

Most important of all, however, are the findings in the sphere of sensation. In this boy there was a well marked, mid-line, partial anaesthesia of the affected leg. Mid-line anaesthesia, like "stocking" or "glove" anaesthesia, is an impaired sensation whose boundaries end abruptly and sharply without reference to the normal over-lapping of the end-plates. This is a most important diagnostic aid and its presence, if definitely confirmed is almost proof positive of a hysterical condition. Anaesthesia of the cornea and pharynx are of almost equal value and often all three will be found. Laryngologists speak of insensitiveness of the pharynx encountered in patients who do not gag despite vigorous manipulation of the uvula or pharynx. In this case the cornea alone was anaesthetic.

A diagnosis of "hysteria, functional paralysis" was made. It was later learned that following a judicial hearing the patient was freed of the charge and given liberty. Soon thereafter paralysis cleared up completely.

CONTRACTURES.

Case 3. Most common of these are contractures of the wrist, the elbow or the back. This case occurred in a French poilu whom I saw in a military hospital at Bordeaux. He was 28 years old and a member of an artillery regiment. On two occasions he had been shell-shocked and there were divers ample proofs of the presence of a fertile foundation for additional neurotic episodes. This man's body was bent over at a right angle and he claimed inability to correct the deformity. Several days previous he had been denied a furlough to visit his home and that night he developed pain and stiffness in his neck. These increased and he was sent to the hospital. Cerebro-spinal meningitis was suspected and lumbar puncture performed with negative findings.

The following morning on attempting to get out of bed he found he could not straighten up after bending over to tie his shoes. He became alarmed and called the nurse who put him back to bed, where, strangely enough, he relaxed in the supine position in perfect com-

fort. However, the moment he attempted to walk he bent over again at right angles. He vouchsafed no explanation of the constrained attitude when upright as opposed to the relaxation and natural posture in bed. His proved a most discouraging case. He was superstitious and credulous, and blaming the needle puncture for his condition became a fixed idea.

Both suggestive and electro-therapy failed to afford relief. Some time later a comrade returning from a pilgrimage to Lourdes brought a flask of holy water. This was given to a priest who used it with such remarkable effect on the patient that the following morning he was well.

Case 3 (b). Another case of contracture occurred in a young machinist who received a second degree burn of the forearm from a short-circuited electric wire. While consciousness was not lost, he vomited and discontinued work for the day. On coming to work the next morning he complained of stiffness of the fingers of the affected arm and in a few hours more they had become clenched and curled, the thumb tucked under in the fetal position. It seemed impossible that the slight burn could produce such a condition or that it could have injured the deeper motor nerves. Examination revealed a well marked "stocking" anaesthesia ending sharply at the elbow and ABOVE the site of injury. He claimed all sensation was lost from the elbow down. Questioning elicited the fact that several years before during a severe electrical storm, lightning struck a tree near where he was standing and for several weeks afterwards he was speechless, having sustained an aphonia.

This man was psycho-analyzed, the reason for the contracture pointed out, and, with the institution of massage, recovery was established in less than a week.

APHONIAS AND MUTISMS.

A distinction is here made between ability to speak only in whispers and total loss of voice. Of the two, aphonia or whispering voice is probably the more common.

Case 4. A man of 26 years complained of sudden inability to raise the voice above a faint whisper. Investigation developed the fact that his mother and sister were both neurotic, the latter subject to fainting. This man was a factory employe who stated that he had always been nervous and "weak," and that on several previous occasions he had suffered from transitory numbness of the left arm. Whether this was a functional condition could not be ascertained but it seems not unreasonable to so class it.

Further investigation revealed that this individual was a "drifter," that is, he possessed insufficient application or concentration to persist at one task more than a short time. The longest he ever held one job was four months and the average less than two. He constantly found fault with his position. This one failed to pay enough; that one was bossed by an uncongenial foreman; another was too hard. As a result he was usually close to financial shipwreck most of the time.

Withal he was abnormally sensitive and misinterpreted the attitude of others to an extent that his outlook on life finally became that of the paranoid. Despite inability to provide for his wife he evidently loved her sincerely and sharply felt her criticism of his failures. The climax arrived just prior to the last attack, when, after being discharged from a recent position for incompetency, she scolded him bitterly. On attempting to weakly justify himself she replied in a storm of anger, "Don't talk to me. I don't want to hear your voice again. You're just a lazy bum."

He was deeply hurt and commenced to brood. The next morning he found his voice in the condition described.

Psycho-analytic effort was profitable and recovery ensued in a few days.

The concept association is plain. Coupled with his inner sense of inadequacy, there was failure to put up a good front to his wife. She refused to accept explanations and in anger said, "I don't want to hear your voice again." The complex fastened itself upon him and he actually did lose his voice. Whether this was a phenomenon of subconscious cerebration, an infantile reaction in an effort to gain pity, or whether the direct suggestion alone was sufficient to produce aphonia was not uncovered.

HYSTERICAL BLINDNESS AND DEAFNESS.

These affections, while not as common as the foregoing, are far from rare. As a rule they are apt to be of traumatic origin, indirect suggestion playing a less prominent part. Hysterical deafness was a frequent symptom of shell-shock, an actual concussion being prolonged into functional deafness.

Case 5 occurred in a machinist 32 years of age. He gave a history of frequent attacks of vertigo, palpitation of the heart and "spells" during which everything went black before him.

While at work in one of the factories he was struck in the right eye by a fragment of steel from a lathe. This was extracted without difficulty by the factory surgeon, who later applied argyrol and assured the man that the injury was trivial. The patient anxiously inquired whether his sight would be affected and he left

the office dubious of the physician's optimistic prognosis.

He returned three days later stating he feared vision was impaired. On removing the eye pad the surgeon found the cornea in excellent condition, neither ulceration nor erosion being apparent. Nevertheless the patient insisted he was rapidly losing sight. A few days later he again came to the physician, this time stating he was totally blind in the affected eye.

An oculist was consulted who found no pathological condition. The patient readily fell into the simplest traps with trial lenses and reading cards but stubbornly insisted on the infirmity. No reason could be found for malingering and the man was obviously sincere. Finally it was discovered that there was concentric narrowing of the total field of vision, that is, the fields of both eyes, and that in addition the cornea and pharynx were anaesthetic. The diagnosis of hysteria now seemed certain and he was psycho-analyzed. This brought to light a most interesting complex.

The man was of rather more than average intellect and for years had aspirations of emerging from the so-called "laboring" class and entering salesmanship or insurance lines. His wife however, was unsympathetic with these ambitions and his remarkable wages as a machinist, from her viewpoint offset all other inducements.

They had quarreled bitterly on occasions over the proposed change of occupation and each time her superior will had emerged victorious and he had returned to the shop. In time he lost interest in employment, and as he was on a piece work basis, the weekly pay envelope grew slimmer. Perhaps his wife conjectured the reason for this, at any rate she undertook emotional stimulation and nagged him unmercifully.

About this time he read in a Red Cross Magazine of a blinded soldier who had received vocational training and who was now in charge of a corps of real-estate salesmen and earning a good salary. The patient claims no particular attention was consciously paid to this item, but, fitting in so closely with his own ambitions, it is probable that he received a powerful suggestion, and that desire which may be thus formulated, dominated conduct. "I don't like to work in a shop. My wife won't let me change. I want an opportunity for more individual success."

So, when a few days later the injury occurred, a plan of escape from a situation rapidly growing intolerable had already been subconsciously worked out. Blindness (?) furnished him with an excuse to cease shop work, an excuse whose validity and reasonableness even his wife must recognize. If he became blind he could gratify his ambition, although at some cost of personal comfort. Why he compromised on blindness in one eye only, was not ascertained.

DRAINAGE OF THE UTERUS AFTER LABOR, ABORTION, OR MENSTRUATION AND ITS RELATION TO SEPTIC INFECTION.

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It would seem extremely probable that where there is food there is life. The biological scheme of nature consists in a never ending warfare between all forms of life which is most marked between the very low forms and the higher organisms.

Bacteria (the lowest form of plants) are engaged in a continuous parasitism upon the higher animals. These bacteria live upon the surface and in all parts of the *prima via* and are continually attempting to invade the deeper structures. If successful, they are normally destroyed by various body cells. However, if the invasion is very toxic or very rapid, or if the resistance poor, a lodgement is accomplished and products result and the individual is said to be infected. In other words, the mere presence of bacteria does not mean infection—for example, diphtheria or pneumonia carriers.

An odor to the lochia does not necessarily signify septicemia but simply means that saprophytes are present (which I believe to be normal here as in other parts of the body) and that they are breaking down the tissues where the blood supply has been cut off. This is the normal function of saprophytes in nature and is for constructive purposes. Thus all dead tissue is broken down into its original constituents and the bacteria enable the cycle of higher plant and animal life to continue.

That saprophytes are present in nearly every case of abortion and labor has been shown by various researches and by the ever present lochial odor or the gasses of decomposition.

There is a large amount of dead material to be thrown off from a normal puerperal, uterus, (or in an abortion) as the decidua serotina remains after the placenta is extruded. Small pieces of placenta or amnion and chorion are frequently disintegrated by the saprophytes and drain off without causing harm. Therefore, the relative infrequency of septicemia is a question of drainage, resistance and lack of foreign organisms rather than one of a sterile uterus. This process of reducing the inner lining of the uterus to its original constituents is the same everywhere in nature when life in a tissue ceases and bacteria enter.

Bacterial disintegration does not normally extend to the uterine muscle whose 2½ pounds

of flesh are digested and absorbed by the body cells. The decidual cells are unable to digest themselves after the placenta leaves. The digestive properties of the placenta seem to be one of its living propensities. Thus the digestion and the absorption of the living uterus by the body cells differs from the disintegration of the dead cells by saprophytes. The first, results in an absorbable food; the second, in a toxin.

An abscess cavity in which the organism dies from lack of food, oxygen, or an accumulation of their own end products is very different from the uterus which is the best possible incubator for bacteria as it was for the baby.

It is very likely that even after menstruation where drainage is imperfect, these ever present saprophytes may cause trouble. I have had a number of dysmenorrhea cases who have had added to their dysmenorrhea, symptoms of a focal infection. Drainage being imperfect invasion and absorption of mild toxins occurred part or all, of the month. I have no doubt that many of the vague pains in the uterus, bladder, ovaries and tubes are caused in this manner by a pelvic absorption. This damage to pelvic structures is insufficient to palpate, but causes the patient much increased tenderness, pain, or augmentation of nervous symptoms at menstruation. The uterus as a site of focal infection after menstruation has not been mentioned before as far as I am aware.

The association of phlegmasia alba dolans with imperfect drainage after labor and abortion was very marked in a number of my cases. Where the gonococcus was also found, the recovery was much slower and the malady more severe. One can hardly doubt that when the uterus is filled with infectious material that the tubes, ovaries, lymphatics, and venous channels soon suffer and transmission through the veins occurs.

I have found if one palpates for mild degrees of milk leg, he frequently finds tenderness in the veins of the pelvis, down the internal saphenous vein and in the calf of the leg. Look for this in every case of infection following labor or abortion where the temperature goes to 101 degrees and you will be surprised to note how frequently tenderness can be demonstrated at these points. The harm done by mild grades of infection is very great and much of it could be avoided by proper drainage.

If my foregoing remarks are only partially true, it would seem logical that immunity to infection is often more a question of resistance and drainage than one of absolute asepsis. It

is very doubtful if we ever maintain absolute sterility even in abdominal operations where it is much easier to control than in work about the perineum. I will not go into details of resistance from the point of view of the blood, i.e. agglutinins, opsonis, aggressins, extra cellular and soluble toxins, but will confine myself to the surgical aspect. Great differences exist as to the toxic power, rapidity of invasion, etc., of different organisms. Also they may change their morphological and toxic properties due to the change of habitat, (food, temperature, or oxygen) and to the addition to the colony of a different organism. A saprophyte is said to aid the gonococcus. A change from a non-haemolytic to a haemolytic has been noted. In some cases the relation of one organism to another results in a vicious cycle. These points would all argue toward haste in drainage and the treatment for a pure culture seems to be of short duration. One never sees a field with one variety of plant growing on it. There are always weeds starting.

However, my principal point is that grave infections can be engrafted upon a comparatively simple and almost normal condition. To reiterate—the saprophytes after labor or abortion where drainage has been interfered with and culture media is thereby much improved, may assume a violent and energetic growth so that a patient who could have been cured at a temperature of 101 to 102 degrees reaches a fever of 104 to 105 degrees. It is my belief and experience that at a temperature of this height, invasion of the lymphatics and blood stream soon occurs or has occurred and the patient is beyond the help of local surgery.

TREATMENT.

As far as I am familiar with obstetrical text, the subject of drainage after labor and abortion is neglected or omitted entirely. The ancients placed much stress upon suppression of the lochia, but after the advent of the aseptic era, the mere presence of bacteria was considered the cause of all disease. The nurse will tell you that the lochia has an odor and hence the fever, but she fails to notice the cases where there is an odor and no fever.

The concurrence of opinion is that after labor a temperature of 100 degrees is normal. At a temperature of 101, I give ergot, half a dram + i.d. and 10 grains of quinine, and, if this is

not effective, pituitrin as the ergot and the pituitrin have an excellent crossed action.

If the temperature reaches 102 degrees, a uterine douche is used. No doubt the effect of this is to open the inner os and increase drainage. Frequently, as the douche nozzle is inserted, a small amount of infectious material, oozes out. This material may resemble blood serum or blood rather than pus, and yet be highly toxic.

At the end of 24 hours, if the temperature again goes to 102 degrees, I sew in a drainage tube to the cervix and leave it until the patient recovers—ten days or more.

That this comparatively simple procedure can be so highly important, is difficult to understand. Its rational is due to the great propensity of the inner os to contract, and the ease with which the uterus occludes itself, due to change of position. Through hard knocks, and bitter experience, I have come to believe in it, especially if it is done early before absorption occurs; and I am convinced that it will prevent many incisions of the cul-de-sac of Douglas, hysterectomies and even deaths.

ERRORS IN SURGICAL DIAGNOSIS.

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Surgical procedures of the present are based upon an immense amount of actual experience in the operating room, and unfortunately in the morgue, by the best minds that medicine has ever produced. Nevertheless, with all we have seen in civil practice and in a tremendous amount of classified material that the Great War has given us, we still have marked percentages of error in our surgical diagnoses, for which we must occasionally blush. Some of these are due to ignorance, to "rule of thumb" methods, and to neglect of exercising sufficiently and thoroughly the senses we have been given, and trained in clinical observation. Again, the vicious habit of some in constantly permitting operative procedures by which to make diagnoses, called exploratory, and performing abdominal operations without fully complying with the differential diagnostic means near at hand, cannot be decried too vehemently.

Modern surgical diagnosis cannot be separat-

ed from the diagnosis of the internist, except that the diagnosis for surgical operations by a thorough going surgeon is more thorough, because he checks his primary written pre-operative diagnosis by an actual physical observation of the pathology, and in major number of cases, by a microscopic examination. Much of the work done in an exclusive practice of internal medicine can hardly boast of any such constant fullness of experience.

Diagnosis in surgery means the employment of the microscope in the examination of pathologic specimens and the various secretion of the alimentary and urinary canals, cavities of the body, and differentiating various micro-organisms, etc., it means the thorough use of various other types of scopes; it means the use of the X-Ray in its manifold ways; it means the use of the keenest development of our senses; and it means the differential diagnosis by all the physical and chemical means of science. The diagnosis must be coached in terms of pathology, with a micro-pathologic picture. Therefore, a very careful examination of every organ possible must be made, not only to make a diagnosis but to determine whether the case is operable or not. Furthermore, one must place every observation on a written record, the pre-operative diagnosis finally summed up before the operation in writing, and a written post-operative diagnosis later, for an actual comparison. In this way we become more proficient in surgical diagnosis, and give to the patient not only operation because they have trust in us, but an operation justified by the previous diagnosis based upon a series of thorough, honest, scientific observations, that honor medicine as an art.

A class of cases that try the practitioners and bring with them the most tangled set of symptoms for which you must seek the cause, is the so-called neurotics. In our modern way, we must last of all, call any one a neurotic, because to so designate him, is to acknowledge our ignorance and to send him on his way to a more astute practitioner who may with keener observation find a cause. To operate on one who is truly a neurotic is to make his condition worse. I will acknowledge that the patient's impression incites carelessness in examination. Therefore, I would caution anyone who may fall in this error.

The Wassermann test has prevented many a

patient from receiving an abdominal operation on account of pain in the epigastrium, or the hypogastrium. Charcot's "gastric crisis" has led many into the abdomen just to find tertiary syphilis the undiagnosed disease. More patients who present themselves at large clinics, and to strange surgeons are afflicted with syphilis when Wassermann tests are carried out. Fifteen per cent. of the routine patients who come to Mayo's clinics have syphilis (Foss). According to Nuzum 8.7% of a large number of Tabetics were subjected to laparotomy on errors in diagnosis where a serological test suggested by a thorough history would have cleared matters perfectly.

The thyroid has been an organ of especial interest to me. In this country many surgeons are delving in thyroid surgery and I wish to state at this time that it requires considerable judgment and studied experience in various enlargement of thyroids, in hyperthyroidism and exophthalmic goiters to make a proper thyroid diagnosis. It is upon this diagnosis that the proper moment has arrived for the operation on an exophthalmic case, that the necessary amount of goiter has been removed in hyperthyroidism, and that the best results are obtained from surgical interference in goitre. We must always realize that the thyroid is an important endocrine gland belonging to an hormone that will be disturbed by improper removal. Also, it must be remembered that diseased thyroids of certain types—adenomata, hyperplastic, etc.—when left to continue in the neck will cause serious permanent degenerations of the vital organs as the heart, liver and nervous system, from which patients never recover.

Abdominal pain has led more into error than any other single primary symptom. In all our memories we know of an abdomen opened for an acute or sub-acute appendicitis, or gall bladder infection, when later the patient was found to have had a definite pneumonic consolidation or pleurisy with effusion. Recently I saw a young man whose pain was distinctly in the kidney area and down the left ureter, from whose pleural cavity I removed fluid. Careful examination of the chest in abdominal cases will give more satisfaction to the observer than a dozen times as many successfully removed normal appendices, or drained normal gall bladders, or absent kidney stones.

It is true that in the best regulated clinics where the patients run through a mill of examiners that 10% is the error in exact diagnosis of abdominal conditions. The percentage increases to 33 (Foss) near the stomach region where we find the gall bladder with the bile ducts, the pylorus and the pancreas, and decrease about the appendix and lower down in the abdomen. The lymphatic relationship and the associated infection with the same micro-organism of the appendix, gall bladder, stomach and duodenal walls, the primary being in either of the two former, only emphasize the care of which diagnosis of this region must be made. We can hardly bear much blame in the "acute abdomen" when we find acute pancreatitis or Meckel's diverticulitis the cause, but in making the diagnosis, we should include these possibilities. Furthermore, small incisions increase errors and therefore we must make our incision in the most propitious region, large enough to eliminate disease of associated and unassociated organs in order to justify morally our diagnosis, and the method of surgical application for a cure.

The stomach has been designated the relay station for all diseases along the intestinal canal or organs that arise from its analge, as is the bladder trigone the relay station for diseases along the urinary tract. It is a fact that nearly 50% of the symptoms that denote disease of these two regions are diseases of the other organs associated with it. In a former communication on "So-called Bladder Diseases" I brought forth proof of the relationship in the genito-urinary tract.

Again, many patients who have had typical ulcer histories with hunger-pain at the proper interval after meals and regurgitation of acid fluid, have been entirely cured by a simple appendectomy. The reverse error in diagnosis with later disastrously managed patients has also been a result.

Any one's visit to one of the large clinics is impressed with the errors that arise in diagnosis of chronic gastric and duodenal ulcers and gall bladder disease even where the pain is typical and an exhaustive roentgen, gastric, and foecal examination has been made. Foss's observation has been that gastric diagnosis errors reach to 33%. Recently I operated a gall bladder that contained eleven large dark gall stones where there was almost a typical set of

subjective symptoms of gastric ulcer with total absence of gall stone attacks, and a 30-pound loss in weight.

The relation of renal pain to renal disease has been thoroughly studied, but occasionally we find that the wrong kidney has been operated upon for a reflex pain, when the stone was later located on the other side. Appendices—the vulnerable point in humanity for attacks by the rapid diagnostician—suffer a loss many times where there are distinct lesions of the genito-urinary tract, that a careful cystoscopy and X-Ray would have differentiated. In previous papers I have outlined what errors can arise in not fully appreciating pain, pus and blood in the urinary tract and the need of more accurate methods of differentiation. Hugh Cabot reported in a series of 157 cases of urinary calculi where there had not been any symptom of pain etc. in 14%, and no blood in 32%. Even the X-Ray fails in from 10 to 15% of renal and ureteral calculi (Braach & Cabot). A cystoscopy with ureteral catheterization and a pyelogram will relieve many anxious exhibitions in the operating room of errors in incomplete examination. I have observed noted surgeons err here—an anterior incision was made for an ovarian cyst that proved to be an hydronephrotic kidney; and before a large audience of members of the American College of Surgeons, a prostatectomy proved to be only the removal of a very large stone of the urinary bladder.

In all well-kept hospital records we find where an extrauterine has been missed and occasionally a late operation for a serious appendicitis demonstrated dangerous internal hemorrhage. Much can be said of the need of careful pelvic examination when we find a female suffering from low abdominal pain, slight bloating, rigidity and a varying degree of nausea with irregular menstrual flow.

We all have discovered in opening abdomen that occasionally other more or less serious conditions hang over the patient, and that even though the pre-operative diagnosis becomes justified, symptoms could have arisen from these other conditions. In this regard I wish to mention ovarian cysts with twisted and untwisted pedicals, pus tubes, pedunculated tumors of the uterus, etc. That most common condition—normal pregnancy—has been accused of various types of operable disease.

Rectal examination by palpation, by barium-X-ray, and by the proctoscope has cleared up diagnoses of intra-abdominal malignant growths by noting enlarged glands, carcinomatous ulceration, papillomata, etc.

In reviewing the above I feel that to err is human and we all must not chastise ourselves too vigorously, but for each error made we are bound to realize a possible perfect diagnosis and to lay the blame on the proper cause. In this way the percentage of failures will be decreased.

I wish to take this opportunity to state even though we are located far from large cities, careful and scientific surgical diagnosis can be made and access obtained to blood counts, serological, roentgen, bacteriological, and cystoscopic examinations.

The American College of Surgeons, through its director, Mr. Bowman, has done much for better surgical diagnosis by the hospitalization plans organized in these recent five years.

To be just in administering our surgery with the legal right to practice it, we have a full measure of responsibility, and in due respect to our patients and the trust so placed in us, we are in duty bound to give the case the best surgical diagnosis complying with all the means at the command of modern science. A slipshod examination followed by an operation has as much justice as the advice to proceed over a newly frozen lake giving it our assurance of absolute safety.

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ROADS.*

E. H. FOUST, M.D.

ITHACA, MICH.

The writer of this paper makes no pretense of imparting to the brothers present this afternoon anything which shall display any particular erudition, in fact I doubt that he shall say anything but that all of you know. But really it is true, be the subject matter and sub-

ject common place as herein shall be given, or a treatise displaying much thought, profound wisdom, and study, we oftentimes gain the most good in thinking over together, those things which we all of us already know.

The roads that I have in mind are not constructed from and on Old Mother Earth, but from and on the experiences of Medical Men in decades gone by. They are the roads to a successful medical practice. Successful medical practice consists of one thing and one thing only. Namely, curing your patients or, if incurable, giving them such relief and such a degree of freedom from their ailments as is possible considering their disease and condition.

This is evidently impossible without the doctor having been educated primarily to think and reason and secondarily to make diagnoses, and having these as a basis he must know his **therapeutics**.

After all this before he can do his work successfully he must have, not only his own successes and failures but must come in contact with others whose successes and failures have been incorporated as a part of his own.

The time has long since gone by when a man is accepted as a doctor because of his outward show or ostentation. Once he who wore a silk hat carried a pill bag and drove a good team, was admitted to the sick chamber and the lives of the family placed in his care. Now, the majority of the people must know something of his training his associates, his habits and his ability, before they are willing to admit him to this most sacred association.

Thus far it would seem as though I too, think there is but one road that based upon first class training and experience. I do believe that these are the essentials, and the better a man is trained and the wider his experiences the better the doctor. But, different localities demand different kinds of men. Some men who are being successful in certain parts of the country and certain localities, with but meager training would be absolute failures in another but are seemingly meeting with as great success in the curing of their patients as are others of vastly superior training and experience in another locality.

I believe much of this is due to the fact that anyone to be successful in his medical work must have the confidence and co-operation of the people for whom he is working. Many are the simple remedies and measures if properly applied and persisted in which will accomplish much good; and oftentimes a few remedies well studied and much used become as powerful a

*Read at the April meeting of the G. I. C. County Medical Society.

weapon in the hands of such a one as a much larger number coming within the knowledge of one better read but perhaps less often used and less critically studied.

Last but not least, of the necessities for success is, that he should be well cared for in a financial way. Most people think the reason physicians have good comfortable homes and surroundings is, that they have larger incomes than men in other walks of life. This is in a measure true and insofar as it is true it is due not because it is in itself so lucrative a profession but because of the long steady hours of work done out of every 24, and I believe it is the exceptional profession or business followed as closely as the financially successful medical man follows his, which does not yield better returns in dollars and cents.

I also maintain that a physician's life is such that in order to do the best work of which he is capable, he absolutely requires much of the better things of life in his home and office to put him in the proper mental and physical condition. And, because of this fact it is a duty he owes both himself and clientele, that he be a

good business man. If he is not naturally such he should pay special attention to it and educate himself along that line. He should adopt a system of doing business and follow it. Be regular in sending out his statements, and if necessary, insist upon his pay. And once they learn how he does business there will be but little trouble along that line, and they will soon recognize that he is giving them the best possible of himself, his supplies and his equipment and if they do not it isn't a breach of professional ethics or good business principles to mention the fact to them and modestly add that the reason he is enabled to do so is because of the business method he adopted of working for two classes of people only namely, those who pay their bills promptly and those who will pay as soon as possible. Then to summarize there are five roads uniting to make a successful road to medical practice:

Good Training.

Broad personal experience.

Incorporation of others' experiences.

Sympathy and co-operation of the people.

Good business policy.

I will be in Kalamazoo
May the 25th, 26th and 27th
Attending the
Fifty-fifth Annual Meeting
of the
Michigan State Medical
Society

Official Program of the 55th Annual Meeting of the Michigan State Medical Society held in Kalamazoo

May 25, 26, 27, 1920

OFFICERS AND COMMITTEES

President: Charles H. Baker, Bay City.

Chairman of Council: William J. Kay, Lapeer.

Secretary: Fred'k C. Warnshuis, Grand Rapids.

PROGRAM COMMITTEE

General Medicine: E. G. Eggleston, Chairman, Battle Creek; William Northrop, Secretary, Grand Rapids.

Surgery: A. O. Hart, Chairman, St. Johns; F. C. Witter, Secretary, Detroit.

Gynecology and Obstetrics: C. E. Boys, Chairman, Kalamazoo; Ward F. Seeley, Secretary, Detroit.

Ophthalmology and Oto-Laryngology: Harold Wilson, Chairman, Detroit; H. L. Simpson, Secretary, Detroit.

President: Charles H. Baker, Bay City.

Secretary: Frederick C. Warnshuis, Grand Rapids.

COMMITTEE ON ARRANGEMENTS

C. E. Boys, Chairman, Kalamazoo.

B. A. Shepard, Kalamazoo.

L. H. Stewart, Kalamazoo.

E. P. Wilbur, Kalamazoo.

Herman Ostrander, Kalamazoo.

PLACE OF MEETINGS

GENERAL SESSIONS—Auditorium First Congregational Church.

HOUSE OF DELEGATES—First Congregational Church.

SECTION ON MEDICINE—Auditorium, First Baptist Church.

SECTION ON SURGERY—First Congregational Church, class room to east of auditorium.

SECTION ON OBSTETRICS AND GYNECOLOGY — First Congregational Church, class room to north of auditorium.

SECTION ON OPHTHALMOLOGY AND OTO-LARYNGOLOGY — Second floor Y. M. C. A.

REGISTRATION—Entrance First Baptist Church.

EXHIBITS — Basement First Baptist Church.

DINNER AND CABARET—Tuesday Evening—Burdick Hotel; Wednesday—5:30 P. M.—K. of P. Temple.

THE COUNCIL

W. J. Kay, Lapeer, Chairman.

F. C. Warnshuis, Grand Rapids, Secretary.

First Session: May 25th, 12 M. Burdick Hotel.

Second Session: May 25th, 6:00 P. M. Burdick Hotel.

Third Session: May 26th, 12 M. Burdick Hotel.

Fourth Session: May 27th, 12 M. Burdick Hotel.

HOUSE OF DELEGATES

Presiding Officer—President Charles H. Baker, Bay City.

Secretary—Frederick C. Warnshuis, Grand Rapids.

SESSIONS.

FIRST, MAY 25TH—2:00 P. M. First Congregational Church.

SECOND, MAY 25TH—7:00 P. M. First Congregational Church.

THIRD, MAY 26TH—8:00 A. M. First Congregational Church.

FOURTH, MAY 27TH—8:00 A. M. First Congregational Church.

FIRST SESSION.

ORDER OF BUSINESS.

MAY 25TH AT 2:00 P. M.

1. Call to Order.
2. Report of Credential Committee.
J. H. Dempster, Detroit.
G. F. Young, South Haven.
M. Gallagher, Bay City.

3. Roll Call.

4. Appointment of Committees

1. Election of Nominating Committee.

The Nominating Committee to:

a. Select place for 56th Annual Meeting.

b. Nominate

1st Vice President

2nd Vice President

3rd Vice President

4th Vice President

c. Delegates for two years to American Medical Association to succeed Guy L. Connor, term expires.

J. D. Brook, term expires.

A. W. Hornbogen, term expires.

And their alternates.

d. Member Board of Medical Legal Committee to succeed Angus McLean, term expiring.

2. Appointment of Business Committee.

5. Annual Report of the Council.

W. J. Kay, Lapeer, Chairman.

6. Reports of Committees

a. Industrial and Civic Relations.

b. Public Health Education.

c. Tuberculosis.

d. Insurance.

e. Venereal Prophylaxis.

f. Medical Education.

g. Delegates to American Medical Association.

7. New Business

a. Amendments to Constitution and By-laws.

The Council presents the following amendment:

That Article IX, Section 1, of our constitution be amended as follows: Strike out the words 'three dollars and fifty cents,' and insert the words 'Five Dollars.'

That Chapter XI, Section 1, of our by-laws be amended by striking out the words 'three and one-half dollars' and inserting therefor five dollars and adding to the first sentence "and medical defense protection."

b. Resolutions.

c. Motions.

d. Miscellaneous.

SECOND SESSION.

MAY 25TH AT 7:00 P. M.

1. Call to Order.

2. Report of Committee on Credentials.

3. Roll Call.

4. Reports of Committees Standing and Special.

5. Unfinished Business.

6. New Business.

THIRD SESSION.

MAY 26TH AT 8:00 A. M.

1. Call to Order.

2. Report of Committee on Credentials.

3. Roll Call.

4. Committee Reports.

5. Unfinished Business.

6. New Business.

FOURTH SESSION.

MAY 27TH AT 8:00 A. M.

1. Call to Order.

2. Roll Call.

3. Report of Nominating Committee.

4. Committee Reports.

5. Unfinished Business.

6. Resolutions.

7. Adjournment Sine Die.

HOUSE OF DELEGATES

NOTE—The black-face type that of the Delegate; the light-face type that of the Alternate.

ALPENA—Branch No. 48

D. A. Cameron, Alpena.

William Arscott, Rogers.

ANTRIM-CHARLEVOIX-EMMETT — Branch No. 41.

R. D. Engle, Petoskey.

F. F. McMillan, Charlevoix.

BARRY—Branch No. 26.

G. W. Lowry, Hastings.

B. C. Swift, Middleville.

BAY-ARENAC-IOSCO—Branch No. 4.

C. M. Swantek, Bay City.

Morton Gallagher, Bay City.

G. W. Moore, Bay City.

R. W. Brown, Bay City.

BENZIE—Branch No. 59.

BERRIEN—Branch No. 50.

E. J. Witt, St. Joseph.

N. A. Herring, Benton Harbor.

BRANCH—Branch No. 9.

W. A. Griffith, Coldwater.
D. H. Wood, Coldwater.

CALHOUN—Branch No. 1.

H. A. Shurtleff, Marshall.
H. A. Powers, Battle Creek.
J. W. Gething, Battle Creek.
H. M. Lowe, Battle Creek.

CASS—Branch No. 36.

J. H. Kelsey, Cassopolis.
E. W. Tonkin, Edwardsburg.

CHEBOYGAN—Branch No. 58.

C. B. Tweedale, Cheboygan.
W. E. Chapman, Cheboygan.

CHIPPEWA-LUCE-MACKINAW—Branch No. 35.

C. J. Ennis, Sault Ste. Marie.
Robert Bennie, Sault Ste. Marie.

CLINTON—Branch No. 39.

A. O. Hart, St. Johns.
F. E. Lutton, St. Johns.

DELTON—Branch No. 38.

Ferris Summerbell, Nahma.
J. F. Defnet, Escanaba.

DICKENSON-IRON—Branch No. 56.

W. J. Anderson, Iron Mountain.
B. W. Jones, Vulcan.

EATON—Branch No. 10.

V. J. Rickard, Charlotte.
A. H. Burleson, Olivet.

GENESEE—Branch No. 24.

E. G. Dimond, Flint.
J. C. Benson, Flint.
A. C. Blakely, Flint.
F. E. Reeder, Flint.

GOGEBIC—Branch No. 52.

L. O. Houghton, Ironwood.
W. E. Tew, Bessemer.

GRAND TRAVERSE-LEELANAU—Branch No. 18.

H. V. Hendricks, Traverse City.
L. Swanton, Traverse City.
E. L. Thirby, Traverse City.

GRATIOT-ISABELLA-CLARE—Branch No. 25

L. J. Burch, Mt. Pleasant.
C. M. Baskerville, Mt. Pleasant.

HILLSDALE—Branch No. 3.

B. F. Green, Hillsdale.
T. H. E. Bell, Reading.

HOUGHTON-BARAGA-KEWEENAW—Branch No. 7.

A. F. Fischer, Hancock.
W. A. Manthei, Hubbell.

HURON—Branch No. 47.**INGHAM—Branch No. 40.**

B. M. Davey, Lansing.
M. S. Holm, Lansing.
S. Osborne, Lansing.
J. G. Rulison, Lansing.

IONIA—Branch No. 16.

A. B. Penton, Smyrna.
G. A. Stanton, Belding.

JACKSON—Branch No. 27.

Walter Snow, Jackson.
P. I. Edwards, Jackson.

KALAMAZOO-VANBUREN-ALLEGAN—Branch No. 64.

R. E. Balch, Kalamazoo.
G. F. Young, South Haven.
O. D. Hudnutt, Otsego.
Della Pierce, Kalamazoo.
C. H. McKain, Vicksburg.
J. H. Van Ness, Allegan.

KENT—Branch No. 49.

J. D. Brook, Grandville.
F. J. Lee, Grand Rapids.
R. H. Spencer, Grand Rapids.
H. J. Pyle, Grand Rapids.
W. H. Veenboer, Grand Rapids.
H. S. Collisi, Grand Rapids.

LAPEER—Branch No. 23.**LENAWEE—Branch No. 51.**

R. H. Nelson, Hudson.
A. W. Chase, Adrian.

LIVINGSTON—Branch No. 6.**MACOMB—Branch No. 48.****MANISTEE—Branch No. 19.**

R. S. Ramsdell, Manistee.
H. D. Robinson, Manistee.

MARQUETTE-ALGER—Branch No. 28

A. W. Hornbogen, Marquette.
V. H. Vandeventer, Ishpeming.

MASON—Branch No. 17.**MECOSTA—Branch No. 8.**

G. Lynch, Big Rapids.
Glenn Grieve, Big Rapids.

MENOMINEE—Branch No. 55.

W. R. Hick, Menominee.
H. A. Vennema, Menominee.

MIDLAND—Branch No. 43.

E. J. Dougher, Midland.
S. M. Sjolander, Midland.

MONROE—Branch No. 15.

W. F. Acker, Monroe.
Herbert Landon, Monroe.

MONTCALM—Branch No. 13.

H. B. Weaver, Greenville.
W. H. Lester, Greenville.

MUSKEGON—Branch No. 61.

F. B. Marshall, Muskegon.
Jacob Oosting, Muskegon.

NEWAYGO—Branch No. 50.

James E. Peltier, Newaygo.
Willis Geerling, Fremont.

OAKLAND—Branch No. 3.

G. W. McKinnon, Oxford.
C. Neafie, Pontiac.
A. B. Corbit, Oxford.
F. German, Pontiac.

OCEANA—Branch No. 67.

A. R. Hayton, Shelby.
F. A. Reetz, Shelby

O. M. C. O. R. O.—Branch No. 11.

A. C. MacKinnon, Atlanta.
L. A. Harris, Gaylord.

ONTONAGON—Branch No. 66.

E. J. Jones, Ontonagon.
F. W. Mc Hugh, Ontonagon.
A. R. Pierce, Rockland.
J. S. Nitterauer, Ontonagon.

OSCEOLA-LAKE—Branch No. 30.

A. Holm, Le Roy.
O. J. East, Reed City.

OTTAWA—Branch No. 32.

R. H. Nichols, Holland.
A. Leenhouts, Holland.

PRESQUE ISLE—Branch No. 63.**SAGINAW—Branch No. 14.****SANILAC—Branch No. 20.**

C. G. Woodhull, Marlette.
J. C. Webster, Marlette.

SCHOOLCRAFT—Branch No. 57.

W. J. Saunders, Manistique.
S. H. Rutledge, Manistique.

SHIAWASSEE—Branch No. 33.

R. C. Mahaney, Owosso.
W. E. Ward, Owosso.

ST. CLAIR—Branch No. 45.

M. E. Vroman, Port Huron.
J. A. Attridge, Port Huron.

ST. JOSEPH—Branch No. 29.

David Kane, Sturgis.
Fred A. Lampman, White Pigeon.
A. W. Scidmore, Three Rivers.
J. J. Kelley, Burr Oak.

TUSCOLA—Branch No. 44.

I. D. McCoy, Cass City.
Dr. Race, Caro.

TRI—Branch No. 42.

G. D. Miller, Cadillac.
S. C. Moore, Cadillac.

WASHTENAW—Branch No. 42.

J. A. Wessinger, Ann Arbor.
F. R. Waldron, Ann Arbor.

WAYNE—Branch No. 2.

J. H. Dempster, Detroit.
G. E. Mc Kean, Detroit.

R. C. Andries, Detroit.
James D. Matthews, Detroit.
J. Van Becelaere, Detroit.
R. E. Mercer, Detroit.
H. W. Yates, Detroit.
Walter J. Wilson, Detroit.
J. H. Carstens, Detroit.
J. H. Mac Millan, Detroit.
C. E. Simpson, Detroit.
J. E. Davis, Detroit.
F. B. Walker, Detroit.
Rolland Parmeter, Detroit.
C. D. Brooks, Detroit.
A. Mc Lean, Detroit.
Neal Hoskins, Detroit.
Joseph Andries, Detroit.
F. N. Blanchard, Detroit.
C. S. Wilson, Detroit.
D. M. Campbell, Detroit.
F. B. Tibbals, Detroit.
C. S. Thomson, Detroit.
J. M. Robb, Detroit.
J. N. Bell, Detroit.
Worth Ross, Detroit.
H. W. Hewitt, Detroit.
R. J. Palmer, Detroit.
L. C. Donnelly, Detroit.
R. F. Foster, Detroit.
I. S. Gellert, Detroit.
A. R. Moon, Detroit.
W. P. Woodworth, Detroit.
W. L. Babcock, Detroit.
G. L. Kiefer, Detroit.
Robert Beattie, Detroit.
H. R. Carstens, Detroit.
B. H. Larsson, Detroit.
Carl R. Meloy, Detroit.
B. R. Hoyt, Detroit.

GENERAL SESSION

PLACE: First Congregational Church.

TIME: May 26th 9:30 A. M.

PRESIDING OFFICER: President Charles H. Baker, Bay City.

SECRETARY: Frederick C. Warnshuis, Grand Rapids.

1. Call to Order.
2. Invocation
Rev. J. Tyson Jones, Pastor First Congregational Church, Kalamazoo.
3. Address of Welcome
Mayor A. J. Todd, Kalamazoo.
4. Address of Welcome
Walter Den Blyker, M.D., President, Kalamazoo Academy of Medicine.
5. Response
President Charles H. Baker, Bay City.
6. Report of House of Delegates
The Secretary.
7. Presentation of Memorial Tablet.
Commemorating our Members who

made the Supreme Sacrifice in the World's War—Herman Ostrander, M. D., Kalamazoo.

8. Acceptance of Memorial Tablet.
Victor C. Vaughan, Sr., M.D., Ann Arbor.
9. Address
A. P. Johnson, Editor Grand Rapids Daily News.
10. Miscellaneous Business or Resolutions.
11. Nominations for President 1920-1921.
12. Adjournment.

SECOND SESSION

PLACE: First Congregational Church.

TIME: May 26th 8:00 P. M.

1. Call to Order.
2. Announcements.
3. Music.
4. President's Annual Address. "Changes in the Relations of the Public and the Medical Profession." Charles H. Baker, Bay City.
5. Music.
6. The Profession and Compulsory Health Insurance.
Frederick R. Green, M.D., Chicago, Secretary of A. M. A. Council on Public Health Education.
7. General Business and Discussion.

THIRD SESSION

PLACE: First Congregational Church.

TIME: May 27th, 11.45 A. M.

1. Call to Order.
2. Report of House of Delegates.
3. Announcement of Ballot for President.
4. Introduction of President Elect.
5. Motions and Resolutions.
6. Adjournment Sine Die.

SPECIAL GENERAL SESSION

PLACE: First Congregational Church.

TIME: May 27th, 9:00 A. M.

COMPULSORY HEALTH INSURANCE

This Special Session is called to afford an opportunity for the presentation, to all of the members, of the problem of their civic and industrial relations with special reference to Compulsory Health Insurance. An exhaustive discussion of the subject will be presented.

1. Call to Order—9:00 A.M.
2. Report of the Committee on Civic and Industrial Relations, G. H. Frothingham, Chairman, Detroit.

Affirmative.

3. Mr. John B. Andrews, Secretary, American Association Labor Legislation, New York City.
4. Mr. John A. Lapp, L. L. D., Editor Modern Medicine, Chicago Ill.

Negative.

5. "Compulsory Health Insurance a Modern Fallacy."
Edward H. Ochsner, M.D., Chicago, Ill.
6. "Compulsory Health Insurance is a Sign of Economic Degeneration."
George Apfelbach, M.D., Chicago, Ill.
7. "Compulsory Health Insurance from an Economic Standpoint."
William D. Chapman, M.D., Silvis, Ill.
8. Sir Francis Neilson, Chicago, Ill.
9. Discussion: A full and free discussion is invited.

On adjournment the meeting will immediately convene in Second General Session.

SECTION ON SURGERY

CHAIRMAN: A. O. Hart, M. D., St. Johns.

SECRETARY: Frank C. Witter, M. D. Detroit.

FIRST SESSION.

MAY 26TH AT 1:30 P. M.

FIRST CONGREGATIONAL CHURCH.

1. Chairman's Address.
2. Types of Spinal Arthritis
C. L. Washburne, M. D., Ann Arbor,
Discussants: Daniel LaFerte, M. D., Detroit, W. E. Blodgett, M. D., Detroit.
3. Surgery of the Gall Bladder with Lantern Slides and Moving Pictures.
C. D. Brooks, M. D., Detroit.
Discussants: H. E. Randall, M. D., Flint
A. M. Campbell, M. D., Grand Rapids.
4. Diagnosis and Treatment of Kidney Lesions
Daniel N. Eisendrath, M. D., Chicago.
Discussants: H. P. Poston, M. D., Detroit.
H. W. Plaggemeyer, M. D., Detroit.
5. Certain Phases of Goitre Surgery
Willard Bartlett, M. D., St. Louis, Mo.
Discussants: Angus McLean, M. D., Detroit.
J. G. Manwaring, M. D., Flint.

SECOND SESSION.

MAY 27TH AT 1:30 P. M.

FIRST CONGREGATIONAL CHURCH.

- (a) Election of Chairman for one year and Secretary for two years.

1. Traumatic Chest Surgery
R. E. Balch, M. D., Kalamazoo.
Discussants: Matthew Kolbig, M. D., Saginaw.
A. W. Hornbogen, M. D., Marquette.
2. Chronic Appendicitis, The Scapegoat of Abdominal Surgery.
Hugh Cabot, M. D., Ann Arbor.
Discussants: A. W. Blain, M. D., Detroit
G. W. Green, M. D., Dowagiac.
3. Localization of Brain Tumors After Injection of Air Into the Brain. With Lantern Slides.
Walter E. Dandy, M. D., Baltimore, Md.
Discussants: William Cassidy, M. D., Detroit.
Max Ballin, M. D., Detroit.
4. Carcinoma of the Rectum
Richard R. Smith, M. D., Grand Rapids
Discussants: C. G. Darling, M. D., Ann Arbor.
L. J. Hirschman, M. D., Detroit.
3. The Cure of Cancer of the Cervix by Radical Abdominal Hysterectomy. End Results in Forty-seven Cases Operated Five or More Years Ago.
Reuben Peterson, M. D., Ann Arbor.
4. The Present Status of Abdominal Cesarean Section in Michigan.
Alexander M. Campbell, M. D., Grand Rapids.
5. The Transperitoneal Versus the Extra-Peritoneal Type of Cesarean Section.
Walter Manton, M. D., Detroit.
6. The Wisdom of Routine Examination for Gynecologic Diagnosis.
H. Wellington Yates, M. D., Detroit.

SECTION ON OBSTETRICS AND GYNECOLOGY

CHAIRMAN, C. E. Boys, Kalamazoo.
SECRETARY, Ward F. Seeley, Detroit.

FIRST SESSION.

MAY 26TH AT 1:30 P. M.
FIRST CONGREGATIONAL CHURCH.

1. Report of a Case of Encephalitis Lethargica in a Pregnant Woman, with Autopsy Findings.
Merit D. Haag, M. D., Ann Arbor.
2. Nitrons-Oxide-Oxygen Anesthesia in Obstetrics.
William T. Shannon, D. D. S., Anesthetist.
3. The Use of Radium in Pelvic Work.
H. O. Jones, M. D., Chicago, Ill.
4. Some of the Manifestations of the Damage from Labor.
C. Hollister Judd, M. D., Detroit.
5. Report of Two Cases of Glycosuria Complicating Pregnancy.
Roland S. Cron, M. D., Ann Arbor.

SECOND SESSION.

MAY 27TH AT 1:30 P. M.
FIRST CONGREGATIONAL CHURCH.

1. Election of Chairman.
2. Kruckenberg Tumors of the Ovary.
Plinn F. Morse, M. D., Detroit.

SECTION ON GENERAL MEDICINE

CHAIRMAN: E. G. Eggleston, M.D., Battle Creek.

SECRETARY: William Northrop, M.D., Grand Rapids.

FIRST SESSION.

MAY 26TH AT 1:30 P. M.
FIRST BAPTIST CHURCH.

1. Chairman's Address.
2. Differential Diagnosis of Hypertheroidism.
Collins H. Johnston, M.D. Grand Rapids.
3. Symposium on Peptic Ulcer:
 - a. Etiology and Diagnosis.
M. Milton Portis, M.D., Chicago, Ill.
 - b. X-ray Evidence of Ulcer.
Preston M. Hickey, M.D., Detroit.
 - c. Relation of Ulcer to Carcinoma.
William C. Mac Carty, M.D., Rochester, Minn.
 - d. Medical Treatment.
George B. Eusterman, M.D., Rochester, Minn.

Discussion to be opened by Burton R. Corbus, M.D., Grand Rapids, F. J. Sladen, M.D., Detroit, Hugh Cabot, M.D., Ann Arbor.
4. The Problems of Pathological Gall Bladder.
Frank Smithies, M.D., Chicago, Ill.
Discussion to be opened by H. E. Randall, M.D., Flint, Chas. G. Jennings, M.D., Detroit.

SECOND SESSION.

MAY 27TH AT 1:30 P. M.
FIRST BAPTIST CHURCH.

1. Some Points in the Radiographic Examination of the Chest with Particular Reference to the Lung.

J. H. Dempster, M.D., Detroit.
 Discussants: Alden H. Williams, Grand Rapids; A. W. Crane, M.D., Kalamazoo.

2. Symposium on Nephritis:
 - a. Etiology in Nephritis.
To be Announced.
 - b. Pathological Physiology of the Kidney.
Arthur R. Elliott, M.D., Chicago, Ill.
 - c. The Nephritic Heart.
W. C. Stoner, Cleveland, Ohio.
 - d. Therapeutics of Nephritis.
Wilbur E. Post, Chicago, Ill.
 Discussion to be opened by Hugo A. Freund, M. D., Detroit; M. A. Mortensen, M.D., Battle Creek; E. W. Haas, M.D., Detroit.
3. Election of Section Officers.

SECTION ON EYE, EAR AND THROAT

CHAIRMAN: Harold Wilson, M.D., Detroit.

SECRETARY: H. L. Simpson, M.D., Detroit.

FIRST SESSION.

MAY 26TH, AT 1:30 P. M.

SECOND FLOOR, Y. M. C. A.

1. Gifford's Operation for the Destruction of the Lachrimal Sac.
R. G. Sleight, M.D., Battle Creek.
2. A Discussion of the Sluder Operation for Tonsillectomy.
E. J. Bernstein, M.D., Detroit.
3. Eye Injuries in Industry.
Don. M. Campbell, M.D., Detroit.
4. Modern Rhinoplasty.
Ferris N. Smith, M.D., Grand Rapids.
5. Observations of Speno-Palatine Syndrome Headaches.
Roy A. Barlow, M.D., Rochester, Minn.
6. Tonsillectomy in Focal Infections.
Wilfred Haughey, M.D., Battle Creek.

SECOND SESSION.

MAY 27TH, AT 1:30 P. M.

SECOND FLOOR, Y. M. C. A.

1. Election of Chairman.
2. Subject to be announced later.
R. C. Fraser, M.D., Port Huron.
3. Conservative Nasal Surgery.
Howard W. Pierce, M.D., Detroit.
4. Some Phases of Bronchoscopy and Oesophagoseopy.
Albert Furstenburg, M.D., Ann Arbor.
5. The Choice of Cataract Operation.
Walter R. Parker, M.D., Detroit.
6. Subject to be announced later.
Jacob Wendal, M.D., Detroit.

Tentative Program for the Meeting of the MICHIGAN PUBLIC HEALTH ASSOCIATION.

To be held at Kalamazoo, Thursday, May 27,
at 2 P. M.

1. Public Health Administration in Small Cities.
Dr. W. A. Evans, Health Editor, Chicago Tribune, Chicago.
Discussion by Dr. V. C. Vaughan, Ann Arbor.
Dr. Guy L. Kiefer, Pres. Michigan Health Council.
Dr. David Littlejohn, Health Officer, Ishpeming.
Dr. T. E. DeGurse, Health Officer, St. Clair County.
2. Sanitary Engineering in Michigan.
Prof. W. E. Hoad, University of Mich.
Discussion by Mr. E. D. Rich, State Sanitary Engineer, Lansing.
Dr. H. B. Nagle, Health Officer, Jackson.
3. The Laboratory's Co-Operation.
Dr. C. C. Young, State Department of Health.
Discussion by Dr. Plinn F. Morse, Pathologist Harper Hospital, Detroit.
Mr. W. R. Sperry, Chemist Filtration Plant Grand Rapids.
4. Tuberculosis.
Dr. A. H. Garvin, Supt. Detroit Municipal Tuberculosis Sanatorium Department of Health, Detroit.
Discussion by Dr. E. M. Nesbitt, Supt. Grand Rapids Municipal Tuberculosis Sanatorium Dept. of Health.
Dr. William DeKleine, Health Officer, Flint.
5. Public Health Nursing.
Miss Mary Roche, Supervisor Child Hygiene, Dept. of Health Grand Rapids
Discussion by Mrs. Lystra Gretter, Supt. Visiting Nurses' Association, Detroit.
Miss E. L. Parker, Lansing.

Program

INDUSTRIAL PHYSICIANS AND SURGEONS.**Kalamazoo.**

MAY 26TH, AT 4:00 P. M.

1. Call to Order.
Object of Meeting
H. N. Torrey, M.D., Detroit.
2. Paper
Harry M. Mock, M.D., Chicago, President American Association of Industrial Physicians and Surgeons.
3. Organization.
4. Election of Officers.

A cordial invitation is extended to every interested doctor to attend this meeting. Especially is it urged that those engaged in industrial work attend. Doctor Mock has a message that will be of extreme interest and value to you.

TABULATION OF MEETINGS**May 25**

P. M.

- 12:00 Council Meeting.
- 2:00 House of Delegates.
- 6:00 Council Meeting.
- 7:15 House of Delegates.
- 9:30 Informal Smoker.

May 26

A. M.

- 8:00 House of Delegates.
- 9:30 General Session.
- 12:00 Council Meeting.

P. M.

- 1:15 Section Meetings.
- 1:30 Meeting of Public Health Officers and Sanitarians.
- 4:30 Meeting of Industrial Physicians and Surgeons.
- 5:30 Cabaret Dinner.
- 8:00 General meeting. President's address.
Invited speakers.

May 27.

A. M.

- 8:00 House of Delegates.
- 9:00 General Session.
 - (a) Social Insurance.
 - (b) Medical Legislation.

P. M. Section Meetings.

5:00 Adjournment.

ENTERTAINMENT

Tuesday Evening, May 25th, 9:30 P. M.

Burdick Hotel: The Kalamazoo Academy will tender to visiting members, an Informal Smoker and Buffet Luncheon.

Wednesday Evening, May 26th, 5:30 P. M.
K. of P. Temple.

A dinner will be served. The entertainment features will be provided by the Kalamazoo Academy. A charge of \$1.50 per plate will be made. Secure tickets at Registration Booth. For real enjoyment, relaxation and amusement this dinner must not be missed. It's going to be a "hum-dinger," snappy event. Be there when the fun commences, and forget your dignity and age. Yes your wife or ladies are invited.

GOLF.

The privileges of the Country Club Golf Course are extended to all players.

FOR THE LADIES.

Wednesday Morning, May 26th.

Automobile Ride to
Celery Fields
Paper Mills
Kalamazoo

Wednesday Afternoon, May 26th.

Mrs. Herman Ostrander will tender a reception to all visiting ladies at Kalamazoo State Hospital.

Thursday, May 27th.

The wives of the members of the Kalamazoo Academy of Medicine will be hostesses to all the ladies at a luncheon at the Kalamazoo Country Club.

SPECIAL GENERAL SESSION

This Special Session is the most important meeting to be held. It will afford an opportunity for each member to become thoroughly familiar with the problem of Compulsory Health Insurance. Both sides of the question will be presented by able speakers from without the state. Not a single member can afford to miss this meeting. Remember the time, Thursday Morning at 9:00 A. M.

REGISTRATION

Registration Booth will be open from 1:00 to 8 P. M., May 25, and from 8:00 A. M. to 6 P. M., May 26th, and from 8 A. M. to 1:00 P. M., May 27th.

Delegates must present their credentials to the Credential Committee before they will be enrolled as members of the House of Delegates.

The Journal

OF THE

Michigan State Medical Society

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

A. L. Seeley, ChairmanMayville
 L. W. TolesLansing
 R. S. BucklandBaraga

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The Society does not hold itself responsible for opinions expressed in original papers, discussions, communications, or advertisements.

Subscription Price—\$5.00 per year, in advance.

May

Editorials

DOES GRAND RAPIDS NEED A HEALTH CENTER?

The gist of the Health Center idea is the correlation of public health agencies in the effort to reach a maximum part of the population and to make available medical, sanitary, nursing and social services in so far as these forces exist in a community, and to fill in any gaps that may exist.

Information — comprehensive, dependable, tabulated—about Grand Rapids health and health machinery does not exist. If it does, it is kept under lock and key. We need facts—recruited, assembled and deployed for action. Somebody should get busy. The Department of Public Welfare of the city has power to make such a needed survey. "He (Director of Public Welfare) shall have charge . . . of the securing and compiling of statistics bearing upon the question of health and poverty, and statistics upon such other local social problems as

the City Manager may direct." (City Charter, Official Edition, Page 26). The Federation of Social Agencies could make such a survey. The Association of Commerce could. Why should not the organized medical profession, alone or in co-operation with some or all of the foregoing, do this important piece of work and give us a solid foundation for intelligent building?

The plan herewith discussed, then, is not a recommendation based on an analysis of the local situation. It is an a priori plan based on a "once-over." It is a challenge, that is all, justified because some knowledge of the local situation shows too much hit-or-miss activity and not enough bull's-eye program. There are about twenty-two health activities in our city, public and private, with no commendable degree of correlation.

"With the development of many forms of specialized work and its public health application by means of Dispensaries, nurses and other sociologic methods, there has come, and will progressively come, the problem of organizing these specialties and using them in correlation. It is not possible to continue the development of clinics, nurses and other machinery for tuberculosis, for acute contagion, for babies, for school children, for mental diseases, for venereal disease, for other problems about to appear, in separate and independent organizations. Failure will necessarily come from the weight of the machinery.

"As each special problem becomes recognized as such by society and the immediate methods of procedure become fairly well understood, it must be incorporated into the general public health activities of the community. There is no longer need for a multiplicity of special nurses, special clinics, or special organizations." ("Dispensaries": Davis and Warner: Pages 17-18.).

Davis and Warner may be right and they may be wrong. Some communities believe they are right because close co-ordination (in some cases, amalgamation) has already taken place. A situation growing out of the line of least resistance in organization now maintains in a majority of cities—that is, specialized activities have established their own fireside and do not intend to share a communal living-room.

A good example of the difference of opinion along this line is afforded in the proceedings of the Washington Conference of the Federal Children's Bureau. Here Dr. C. E. A. Winslow of the Yale School of Medicine states his position with reference to co-ordination in the following language:

"I am inclined to think that the most successful public-health education in the future will be done by the district nurse working with a small population unit, ready to do ordinary visiting nursing, infant-welfare work, or tuberculosis work, and combining in every field the care of the sick with the educational activities of the modern public health campaign."

Dr. Josephine Baker of the Department of Health of New York City takes strong issue with the position of Dr. Winslow. It is worth reading. (Report of the Children's Bureau Conference, May and June, 1919, Bureau Publication No. 60, p. p. 202, 206).

We have in Grand Rapids forty-two public health nurses. There are none too many: we need a few more, rather. Is there duplication of work here with consequent waste of money and skill? We all have our opinions but who has the facts? An analysis of eleven months' field work of the nurses of one urban organization shows that for every 13 hours spent in the field, 3.95 hours are spent in transportation, although one automobile is in use. This does not mean that 30 per cent of the time of the nurses' working day is taken up with transportation because the nurse has many other significant duties in this organization. Furthermore, a limited amount of out-of-town work affects the percentage. But it does mean that geography is a factor to be reckoned with in the organization of public health work. Does anybody know whether time can be saved, without the sacrifice of efficiency, by districting territory for general nursing? It is accepted as a matter of course in rural nursing. Shall we conclude that we consciously furnish inferior public health service to country as compared with town; or isn't life valuable enough in the country to adapt resources to need?

Is it true for Grand Rapids, as Cincinnati shows as a result of analysis of one month's

work in the social unit, that only 12 per cent. of its patients require the services of more than one visiting nurse? It is something we want to know, is it not? Fidelity in spending other people's money requires an answer to the question. Efficient distribution of nurses in the present scarcity requires an answer. The sanctity of the home is a big consideration. If the scientific search for an answer to this and kindred questions is not desired by doctors, nurses and social workers, where, in Heaven's name, are we to look for it? Because we can show splendid results with a limited number of patients is not an answer to the question: Are we making the best use of our present public health nursing resources? Among many tests to be applied is this one: Not *how many* are we reaching by education and cure but *what proportion* of the population are we reaching?

Take for a further illustration the question of tonsilectomy. There are eight different organizations in Grand Rapids known to the writer that are interested in securing this service for those in need. The pay for the same may come from any one of several sources and it may represent the contribution of service by specialists. In the last analysis it all comes out of the pockets of Grand Rapids & Co. It may be all right to have candidates for free tonsilectomy enjoy the privilege of coming in contact with one or more of eight agencies. It seems harmless and reasonable to seek an answer to the question whether unified clinical service would clear the situation.

If space permitted, we could cite many instances showing confusion and lack of knowledge in other health activities. Are hospital beds being provided fast enough to keep up with the increase in population? What proportion of maternal deliveries is in hospitals, and what are the facts about the death rate—hospital vs, home, physician vs. midwife? Do we need a municipal general hospital? We have about a dozen different kinds of clinics held in different places and at different hours. How does the number of patients in proportion to the population compare with the other cities of our class? Why is it we have practically no hospital social service in a city of 140,-

000 people? What do we know about cancer in this city? What are the orthopedic needs of Grand Rapids? Why are our vital statistics so often challenged? Suppose the social agencies of the city wanted to promote a medical examination month, advocating examination of 100 per cent. of the population, about what medical machinery would such a movement in Grand Rapids center? Scientifically collected facts about the health situation in this city are scarcer than hen's teeth. An active, reliable, vigorous rallying-point for systematic health work is not here. Do we need it?

The accompanying diagram is, we repeat, only a challenge. It is a theoretical proposition for the consideration of those interested. Careful study should be made in the fields of effort touched by the plan to determine if such a centralization is considered desirable from the standpoint of economy, feasibility and efficiency; what the cost will be; whether agencies, provided the plan is found feasible, will agree to operate under the same; and what the administrative details will be.

To the mind of the layman there appear some advantages to the proposed plan. As said before, the disadvantages may be heavier. Our only contention is that the situation demands unbiased study, carefully appraising all viewpoints, and keeping in the foreground the main purpose of the science of medicine, namely, to insure good health to 100 per cent. of the community.

ADVANTAGES.

1. It would tend to insure more accurate diagnosis by the provision of needed though expensive equipment made available to all physicians both in their own paid work and in community free work. A library, a laboratory and all improved equipment would be made available to the members of the profession.

There would seem to be some need of more accurate diagnosis in the general run of medical work. Not long since a patient in Grand Rapids was diagnosed by a local physician as having pneumonia with a streptococcic throat. The patient was sent to the hospital where the diagnosis was measles and whooping-cough.

Another patient with a diagnosis of typhoid fever was found to have influenza.

Gonorrhea and tuberculosis appeared in another case diagnosed as "in a run-down condition needing rest."

A case of "slight bronchitis" proved to be a bad case of congestion of the lungs upon more accurate diagnosis.

A layman is inclined to suppose, even though the percentage of rank diagnoses is small, that a co-operative arrangement between physicians and a Health Center properly equipped, would be an advantage to both the profession and the community. Is this right or wrong?

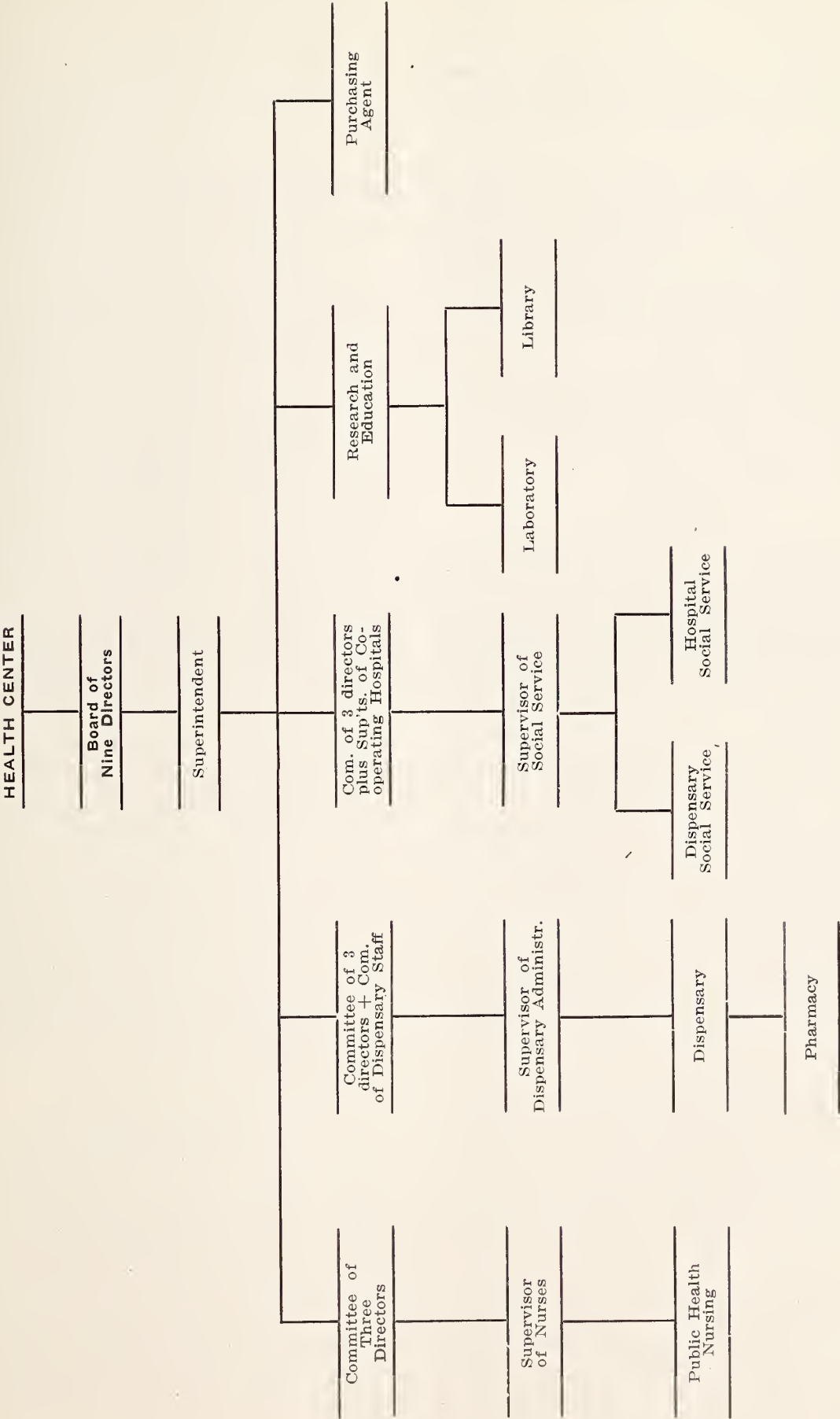
2. Such a Center would provide out-patient service for co-operating hospitals. Clinical material would be available in abundance. This is a matter of hospital administration about which the writer knows nothing but assurances are given that this would be no mean consideration.

3. Nurses in training could secure a splendid insight into general public health work by hospital co-operation with this Health Center. One local hospital now sends its senior nurses to a local health agency for one week. The ease with which arrangements of this sort could be made with the Health Center appears at a glance.

4. Such a Center properly directed would afford occasion for the vigorous prosecution of health studies, would be a source of scientific statistics for the community, and could be made the center of telling health propaganda.

5. The Health Center could determine standards and formulate policies in the difficult matter of free and part-pay service in the three fields of public health nursing, dispensary service, and hospital beds, always taking into account proper protection of the medical profession and the legitimate encouragement of therapeutic treatment. This whole matter needs considerable study in this city.

6. The Health Center should operate to organize, under professional guidance, the services of specialists. The layman with only one eye can see this taking place in hospital management, in sanitarium practice and in the congregation of the offices of physicians mutually



agreeable. If this is going to be done, why not do it on a community basis?

7. It provides machinery whereby hospital social service can be provided with a minimum of expense to the hospital and thus to the community. Is it necessary today to argue for hospital social service?

8. Such a Center because of spontaneous advertising and direct education would continuously be selling good health to the city and would be discovering real needs requiring the ministry of the medical profession and of hospitals in legitimate ways.

9. The whole organization should be sufficiently flexible to encourage rather than to discourage municipal or state participation in the program of the Health Center.

ORGANIZATION.

1. Purpose. This is to centralize under unified control and direction the health activities of our city in the three departments of public health nursing, free and part pay dispensary service, and dispensary and hospital social service.

2. Directors. It would be controlled by a Board of nine directors, which would be divided into three committees of three each, one committee specializing on public health nursing, another on central dispensary, and another on dispensary and hospital social service.

3. Executive Officer. The Superintendent of the Health Center should be a physician, giving full time to the work and have sufficient salary to secure a high grade man for the purpose. Such a salary should be at least \$10,000 a year. An Assistant Superintendent who should be a registered nurse, would be placed in charge of public health nursing department. An assistant superintendent would be in charge of the central dispensary. An assistant superintendent who should be a trained medical social worker would be in charge of the Dispensary and Hospital Social Service department.

4. Public Health Nursing Department. This would aim at centralized direction of all types of nursing. The city would be districted into small units, a nurse for a unit. Specialists would be carried on the staff and would be pro-

vided for any district when necessary in individual cases.

5. Central Dispensary. There should be a centralization of all clinics. Arrangements should be made for free patients and part pay patients. A local physician has suggested that there should be seven bureaus within this central Dispensary Department, with a staff of six specialists for each bureau, one specialist for each day in the week in each bureau.

6. Dispensary and Hospital Social Service Department. This should determine the economic status of patients both for the dispensary and for each of the co-operating hospitals. It should perform social service field work for all co-operating hospitals and for the dispensary.

7. Education and Propaganda. This should be the direct responsibility of the superintendent who should, of course, also be responsible for the operation of all three departments.

8. Equipment. Manifestly, a well equipped building with dispensary facilities and with sufficient office space should be provided.

9. District clinics would be provided according to the judgment of the Board of Directors.

Editor's Comment: The above article, contributed, while dealing more specifically with Grand Rapids, contains so much that is germane to other centers in Michigan that we feel warranted in giving it wide publicity. Maybe, in doing so, we are stirring up a stagnant pool. However, if it awakens a discussion, stimulates an activity so directed that a solution will be reached that will abolish much that is detrimental, we feel we will have achieved a much desired reform. We invite discussion and comment.

APPENDICITIS.

The opinion is unanimous that given the presence of the four cardinal symptoms of appendicitis operative interference, promptly instituted, is the only recognized treatment.

The opinion is also unanimous that given a definite history of one or more acute attacks plus certain likewise definite symptoms of gastro-intestinal disturbances, surgical interference in the interval is the recognized treatment.

However, it does not follow that every pain elicited on palpation of the right iliac region is indicative of appendical involvement. That every gastro-intestinal derangement in which right iliac tenderness is obtained is dependent upon a diseased appendix.

The tendency is rapidly increasing to stop in our search for the true condition, just as soon as in the course of our examination we detect pain or tenderness in the right iliac region, and advise the removal of the appendix for the relief of the condition for which we were consulted. We do not complete our examination and do not exhaust the several means by which we may eliminate or establish the existence of several other conditions that may stimulate appendical disease and which are not corrected by an appendectomy. The appendix is removed but the symptoms complained of still continue. We have been hasty in our conclusions, we have erred in our diagnosis, we have recommended, even urged operation, the patient has had confidence in you and accepted your advice, still, in the end his condition is the same.

We do not propose to enter into a discussion of differential diagnosis, or a presentation diagnostic symptoms of colon, ilium, cecal disease or digestive disturbance, kidney, ureter and spinal involvement with right iliac pain or tenderness as an incident. What we do intend is to urge a more thorough and careful examination and the exercise of greater pains before jumping at a diagnosis of appendicitis.

In the acute condition the diagnosis is not so difficult for in practically every acute case exhibits the four cardinal symptoms, pain, nausea, tenderness and rigidity, in greater or lesser degree. Even then we should not rely upon these alone but should secure a white count.

In the chronic conditions we must secure a definite history of an acute attack. Of course, sometimes a chronic diseased appendix is not always preceded by an acute attack. We should then make a careful physical examination covering every abdominal organ, the kidney, spine, and ureter. A detailed study of diet, digestion, feces and the patient's habits must next be

made. An X-ray gastro-intestinal study cannot be omitted; it is imperative to have such a study before a final opinion is expressed. In brief—a thorough physical examination plus an X-ray intestinal study, plus a study of the diet, plus a laboratory examination of feces, urine and blood must be conducted before a diagnosis of chronic appendicitis is warranted.

The surgeon is confronted with increasing frequency, by patients whose appendix has been removed, usually by someone else, with the continuance of his former symptoms. To prevent the frequency of such occurrences by inviting more careful and complete examination is the sole purpose of this brief editorial comment.

OUR ANNUAL MEETING—WHY GO?

Our 55th Annual Meeting will be held in Kalamazoo, May 25th, 26th and 27th. This issue contains the official program and announcements of the features planned for that meeting. For months the program and arrangements committee have been diligently at work to provide for a meeting that will be of interest and will impart distinct benefits to those who attend.

In addition there will be an exhaustive study and discussion of problems confronting the profession with Compulsory Health Insurance as a prominent feature. To obtain definite information upon this subject and to learn what Compulsory Health Insurance means to each member is in itself compensation sufficient for attendance.

The Section Meetings and the General Sessions promise to be of more than ordinary interest and bound to be of instructive value. And so we might continue to enumerate each feature that is planned for the benefit of each member. We refer our readers to the program itself.

Why go? Because you owe it to yourself to make the most of the scientific program and remain progressive. Because unless you become conversant with the features of Compulsory Health Insurance and assume your part in thwarting its provisions, you are permitting

your professional freedom to be legislated from you. Because, unless you broaden your professional acquaintance you are bound to become narrow, self-centered and inefficient. Because, your State organization stands for you individually and collectively and without your support it cannot exercise its influence in your behalf. Because, your fellows, the profession of Kalamazoo, invite you as their guests. You cannot well decline their hospitality.

So we emphasize and urge a large and full attendance and advise each member that the time spent in Kalamazoo will create a personal beneficial influence and asset. Go—why sure you are going—because you cannot afford to stay home.

Editorial Comments

Well, so long, patients, I am off to the Annual Meeting of my State Medical Society at Kalamazoo. Will be back on the job again May 28th—yep, I'm going to learn something for your and my good. Just keep your bowels open, a bland diet, stay in bed, drink plenty of water and don't worry. What? Yes, if the bottle gets empty have it refilled and keep taking it until I get back. Powders, oh if that gas bothers, take one every 3 hours. Vaccine—oh, the shot I gave you today completes the first course, it's always advisable to wait three or four days before starting a second course of vaccine treatment. Tell Grandma to keep inside during the damp of the evening and her rheumatiz will not bother her while I am away. Aunt Hannah, tell her that I will hear a famous specialist on her trouble and I'll get his latest treatment and give it to her when I return. Well, now Bob's tonsils can wait until I am home again. I'll do a better job for I am going to buy some new instruments from the exhibitors at the meeting.

Martha about due to be sick? No, not according to my figures but of course if pains do come on send for old Doc. Stayer, he never goes to a medical meeting. Martha has always had an easy time and with Granny Smith around you needn't fear but what she will make Doc. Stayer put on rubber gloves and tie off the cord with a sterile tape, so I guess in a pinch Martha will be getting along and then my figures show she isn't due until the first of June. Grandpa Gland, oh, if he should need to be, just send for Dave Smith, you know he was in France, an orderly in a base hospital, and there learned how to pass

a catheter. Yes he can do it as well as I can. I'll speak to Dave. Parson Jones, just a moment, if you should break your glasses, just run into the office and the office girl will put in a new lens, so you won't have to call on Deacon Smith to read scriptures at the Wednesday night prayer meeting. Say Joshua, you and Sexton Smith better go fishing for three or four days because there won't be any calls to lay anyone out while I am at the Medical Meeting in Kalamazoo. Yep, going tomorrow.

—There, we've advanced a few ready answers to give to "patients you can't leave" and which you have in past years advanced as reasons for your absence. Of course other conditions may arise and if they do, you can find a diplomatic way to tide them along until your return. You have simply got to be at this Kalamazoo meeting.

The Journal may be a few days late for the reason that your editor was in attendance at the A. M. A. meeting in New Orleans.

Elected delegates from County Societies will please note that the first session of the House of Delegates convenes at 2:00 P. M., the afternoon of **May 25th**. There will be an extra session of the House of Delegates this year on account of several important matters coming up for official action, hence this afternoon session. It is extremely important that all delegates be present at this first session. Please plan and make it your purpose to be there at roll call.

The Government Quartermasters Department is offering its surplus stock of medicine, instruments, appliances and equipment for sale. There are some desirable bargains being offered. When buying instruments better look them over carefully and if possible note the maker's name. Some of the instruments are a bunch of junk and not cheap at any price—we know because we were compelled to use them at times.

Just take a moment and read through the program for the Kalamazoo meeting. You can't help but want to hear these addresses, papers and discussions. Well, you have simply got to be there—So go.

As a rule, the "Report of or Presentation of Clinical Cases" in our County Society Meetings is an occasion for a pause, silence and then we pass on to "Papers and Discussions." This is unfortunate for we feel that several well reported clinical cases may be made instructive and of practical value. We all run into tight and ticklish places and we must needs be better prepared

when we hear how our fellow meets them. The active experience is frequently more interesting than the theoretical. Then why not develop this feature of our meetings? As a suggestion we advance the plan of having each member, in alphabetical order assume the duty of filling this number of your program. Let one man, in turn, be responsible for the presentation or reporting of two or three cases at each meeting. Try it out, County Secretaries, and let us hear your results.

Yes, Jim who was in your company at Fort Ben or Riley, or who was in your outfit in France, yes, Jim's going to be in Kalamazoo at the State Meeting. Gee, you haven't seen Jim since you left Custer, Sherman or Grant! What? **Sure**, I'm going to the State Meeting. Why, to attend the meetings of the sections of course, but you bet I'm going to see Jim too. The darn cuss, he hasn't written only once since we were discharged and—oh, well, I've got something to tell and see Jim about! When will I be there? Why the first, second and third day—and so will Jim.

It's now not so much the cost of paper but rather the difficulty to secure print paper. We have still a two month's supply but the mills give no encouragement that they will ship us a new supply when our present stock is exhausted. Well, probably another six months will witness the break that is bound to come. If our members, by their patronage, will aid us in maintaining our advertising income we will weather this high cost era. Please, give our advertisers your preference and thus aid us in maintaining your Journal.

Whether selling soap, psychology or health, the process is the same. If success is to be achieved the prospective customer must be made to desire the soap, the student the psychology and the community public health welfare.

We may go one step further and, in like analogy, the doctor must be made to desire medical society affiliation. How?

It is not sufficient that 2900 out of 3500 doctors in Michigan are members of our State Society. It is not sufficient that of the 2900 but fifty per cent approximately are active and the balance are due paying members only. It is not sufficient that of the 1500 active members, that is those who attend their county meetings with some fair degree of regularity, but fifty per cent participate in the discussions. These conditions are not sufficient, are not satisfactory. They must need be altered and their reverse, yes more than that, be attained. We must make the reputable Mich-

igan Doctors' desire—100 per cent—active medical society affiliation.

We request that each county society give this their thought. Then, having thought, pursue a campaign that will sell your medical society membership to every eligible doctor in your county. May we have reports of your efforts?

The entertainment that will be provided by the Kalamazoo profession will be a feature of the Annual Meeting.

An interesting review of experimental work performed on dogs' lungs is reported in the last Johns Hopkin's Bulletin. It reveals the perfecting of a surgical technic in lung surgery and the probability that pneumonectomy can be performed with a warrantable degree of safety.

And yet there exist those who cry out against vaccination when smallpox is epidemic. In spite of all our war observations and demonstrations of vaccine therapy in smallpox and typhoid these poor bigoted fools still adhere to their old "battle-cry" of personal liberty infringement. Gee, but we would like to parade them through a smallpox ward and demonstrate the perniciousness of their attitude.

A DAY IN THE LIFE OF A HEALTH INSURANCE PANEL DOCTOR.

The medical supervisor declares a workman ineligible for benefit whom you have visited three times.

The medical supervisor discharges a case from further benefit which in your judgment needs further attention.

The weekly visit to paymaster's window.

The slip showing amount of "piece work" done.

The 60 per cent. salary dock, because of what the medical supervisor considers too many visits.

The wrangling with officers, managers, auditors, inspectors, examiners, stenographers and clerks.

The chagrin and loss of spirit.

The fading of the sense of individualism.

The farewell to independence.

The unrelieved wage poverty.

The shadow of paternalism.

The misleading statistical data.

The hurried work.

The snap diagnosis.

The stereotyped therapy.

The failure of preventive medicine.

The class distinction between health insurance doctors and those happily independent of such work.

The loss of social and professional prestige.
 The bickering with arbitration committees.
 The political jobs and jobbery of the State
 Commission phase of health insurance.
 The very cheap obstetric case.
 The palliation of social injustice.
 The anesthesia of the American workman.
 The vitiation of the old-time relationship be-
 tween physician and patient.
 The sense of failure as a salaried commercial-
 ist.
 The letter-carrier status.
 The medical society meeting.
 The usurpation of the scientific program by
 health insurance matters.
 The decision to strike.
 The dismal prospect.
 The sense of professional demoralization.
 The cursing of those who wished health insur-
 ance upon us.

The number of small children poisoned by
 poisonous fly destroyers is appalling. Formerly
 blotting paper soaked with arsenic was much
 used for these fly-destroyers. A little piece of
 this was put in an open saucer with some water
 and a little sugar. More recently shallow boxes
 of tin with a wick through the top have come
 into use, but on account of the habit of children
 of putting everything to their lips these seem to
 be as dangerous as the open saucer of poisoned
 water. The fact that sugar is added to draw the
 flies makes these boxes especially dangerous to
 young children. In South Africa the authorities
 have forbidden the sale, except by licensed chem-
 ists, of certain arsenical fly-destroyers, particu-
 larly the tin boxes which have a wick or wicks
 through which the poison is drawn.

In many cases the child at the time the report
 was made was still very sick, while in other cases
 the child was reported as having fully recovered.
 Some cases of poisoning from the use of fly poi-
 sons are doubtless never reported, for it is diffi-
 cult, perhaps impossible, for even an experienced
 physician to distinguish a case of arsenical poison-
 ing from cholera infantum, the symptoms being
 so similar. How many children have been pois-
 oned by these fly poisons and the deaths ascribed
 to cholera infantum can never be known. The
 cases reported are all children from slightly less
 than a year old to six or seven years old. In
 many cases these children are not old enough to
 tell what they have taken if questioned about
 their illness, and unless seen taking the poison
 the chances are that the cause of the child's ill-
 ness will never be known and it will be thought
 the child had cholera infantum. The danger is
 especially great to children of the foreign born

for as is well known, many of the foreigners are
 slow to call medical aid in case of children's
 ailments. In country districts, where it often
 takes several hours to get a physician, it is es-
 pecially dangerous to use fly poisons.

These fly poisons are often exposed on the
 window sill because flies are attracted to the
 light. Babies also are attracted by the light and
 the window sill being in reach is therefore the
 most dangerous place to expose poisonous fly-
 destroyers of any kind.

There are as efficient and more sanitary ways
 of catching or killing flies, and fly poisons if
 used at all should not be used in any home where
 there are children or where children may visit.
 Certainly in our propaganda for health conser-
 vation, child betterment and educational move-
 ments this peril should be recognized and a
 warning be issued so that the coming summer
 does not witness a repetition of these fatalities
 and accidents that are wholly preventable. Ar-
 senical fly-destroying devices are as dangerous
 as the phosphorus match. They should be abol-
 ished.

Correspondence

April 8, 1920

Dr. F. C. Warnshuis,
 Editor Michigan State Medical Journal,
 Grand Rapids, Michigan.

Dear Doctor Warnshuis:

Let me congratulate you on your editorial
 relative to the Starving Physicians in Vienna in
 the last number of the Michigan State Medical
 Society Journal.

What you have to say in that editorial just
 about summarizes the situation. We are being
 solicited in Chicago "ad-nauseam."

I note what you say relative to post-graduate
 courses, etc. I wish to state to you and the mem-
 bers of the Michigan State Medical Society, that
 on all occasions my clinics, university lectures,
 have been freely open to visiting doctors. I
 have never turned anybody away from any of
 my lectures, clinics, etc., because he was not able
 to pay. In fact, during the entire war period,
 when I was pretty busy with medical advisory
 board and State medical executive work, I ran
 both student and volunteer clinics for benefit of
 men in or out of the city. I am still willing to
 do it.

During the coming summer, if a number of
 physicians of the Michigan State Medical So-
 ciety, or any other society wishes, I will give
 a month's course in the diagnosis and treatment

of gastro-intestinal diseases without charge to any of them. This is little enough to do for men who helped to save their country.

With best wishes and appreciating your kind remarks respecting the American College of Physicians, in the recent number of the Journal, I am

Sincerely yours,
Frank Smithies, M.D.

Resolution adopted by the Marquette and Alger County Medical Society, at a meeting held March 29, 1920, at Marquette, Michigan, and adopted by the unanimous vote of the organization.

There is now going on in New York state and in the state of Michigan a movement to secure legislative enactments establishing compulsory health insurance of the wage earning class. Such legislation appears undesirable and pernicious for many reasons.

Compulsory health insurance is essentially destructive of individualism, which is necessary for best national development.

If the medical profession can be socialized, there will be no limit to the extent to which socialism can be carried in this country.

Compulsory health insurance would practically deprive the wage earning class of free choice of their medical attendant.

It would lower the standard of medical practice.

It would check the advance of medical science.

It would drive many practitioners into other occupations.

It has proved a failure in Austria and Germany.

It has pauperized the profession in England.

In view of these facts, and many more that could be arrayed against this proposed pernicious legislation:—

BE IT RESOLVED, that the Marquette and Alger County Medical Society condemns this pernicious legislation.

RESOLVED, that our delegate to the State Medical Society and American Medical Association be instructed to use his influence in the councils to condemn such legislation, and that a copy of these resolutions be spread on the Minutes of our society, and a copy be sent to the Secretary of the State Medical Society and the American Medical Association.

H. J. Hornbogen, Sec'y.

Whereas, The question of 'Compulsory Health Insurance' has been under consideration for five years by the Council on Health and Public Instruction of the A. M. A., and

Whereas, The appointment of Dr. I. M. Rubi-

now as Executive Secretary of the Committee to study and report on 'Compulsory Health Insurance' cannot be regarded other than as a breach of good faith on the part of the Chairman of the Committee, Dr. Alexander Lambert, who selected him for the position, knowing that he (Dr. Rubinow) had been an enthusiastic advocate of 'Compulsory Health Insurance' for over ten years, and

Whereas, While President of the American Association, Dr. Alexander Lambert has been a member and officer of the American Association for Labor Legislation, which is the father of all 'Compulsory Health Insurance Legislation' and as such has appeared at Albany and openly opposed the members of his own State Society, a majority of whom had gone on record as opposed to the scheme, thereby putting the great Medical Association of the United States character of a House Divided Against Itself—its chosen leader fighting on one side, while the rank and file fought on the other and humiliating the medical fraternity of the whole country.

Resolved, That the Wayne County Medical Society of Michigan believe that the proponents of 'Compulsory Health Insurance' have not been able to prove either the necessity for such legislation nor have they been able to show that if the necessity existed, their plan would prove a remedy—that this Society is unalterably opposed to 'Compulsory Health Insurance Legislation' under whatever name it may appear "Social Insurance, Contributory Insurance or State Insurance," the fundamental principles in every case are the same. We believe the proposed legislation to be vicious in character and legislation, which would tend to create a system of caste among our people—would be subversive of individualism and would destroy the usefulness of the medical profession to the people of this country.

Resolved, That the delegates of the Wayne County Medical Society to the M. S. M. S. be instructed, and the delegates from Michigan to the House of Delegates to the A. M. A. be requested to oppose without reservation any attempt to approve of compulsory health insurance under whatever name it may appear.

Resolved, That the delegates from Michigan be requested to ask for a committee to investigate the activities of officials of the A. M. A. in favor of Compulsory Health Insurance—that this committee take up the question of the interlocking directorate which seems to have existed between the American Medical Association and the American Association for Labor Legislation: and further that they introduce a resolution ordering

the propaganda of Drs. Lambert and Rubinow, issued by the Council on Health and Public Instruction, to be stopped at once.

Resolved, That copies of these resolutions be sent to each delegate to the President and Secretary of the State Society and to the Michigan State Medical Society Journal for publication.

April 10, 1920.

Dr. F. C. Warnshuis, Secretary,
Michigan State Medical Society,
Grand Rapids, Michigan.

So many inquiries are coming from communities requesting the Medical School to secure physicians for them that the Faculty at a recent meeting appointed a committee, of which the writer is chairman, to investigate the matter and to suggest some course of action. After considering the matter carefully the committee submitted a report to the faculty, a copy of which is hereto attached.

Inasmuch as this is a matter which concerns the Medical Society quite as much as it does the Medical School, it was thought best that a discussion of the question be entered into with the Council at some time in the near future before the State meeting. Will you therefore take such action as will bring the matter before the Council?

Sincerely yours,
C. G. Parnall.

Deaths

Dr. Stanley N. Insley.

Dr. Stanley N. Insley, of Grayling Mich., after an illness of several months duration departed this life to receive his reward. His death occurred on Jan. 7, 1920, at his home in Grayling, where he had resided for the past twenty-five years. During this time he had won the respect and admiration of all who knew him and through his death, society has lost a honored and respected citizen and the medical profession a man whose value can scarcely be estimated.

His knowledge and ability was always an open book to his professional friends and his keenest delight was to extend to others a helping hand. Dr. Insley was prominent in all matters pertaining to the public good, was especially active in educational matters and it was largely due to his untiring efforts that plans were formulated and perfected for the erection of a proper structure and the development of Mercy Hospital which

under the direction of the Sisters of Mercy stands as a living monument to his sterling worth.

Dr. Insley was born in Picton, Prince Edward Co., Ontario, on June 29, 1870. When two years of age his parents moved to Colborne, Northumberland Co., Ontario. Here he received his early education and after completing his entrance requirements entered Trinity Medical College in Toronto. In 1894 he was graduated from this institution as M. D., C. M. He then spent one year associated with Dr. Malloreay in Colborne, when he decided to seek a new field for his chosen work; he came to Grayling in the Spring of 1896 where he has since been engaged in the active practice of his profession.

He was admitted as Fellow American College Surgeons Oct. 29, 1915.

Dr. Insley was married on April 20, 1898 to Miss Anna M. Reagan of Bay City. To them were born three children, Stanley N. Insley, Margaret J. Insley and Marius L. Insley all of whom survive and with whom society at large as well as the medical profession feel deeply and keenly his loss.

Doctor J. N. Thomas of Reed City died Monday, March 29th following an operation. His widow and one daughter survive.

Doctor Christian Schneider, age 74 years, died at his home in Cross Village, March 29th. Surviving are the widow and four children.

Doctor Charles Mac Laughlin of Elwell, passed away Wednesday, March 17th, after a lingering illness of sixteen months during which time he had not been able to leave his chair.

Doctor Mac Laughlin was born near St. Marys, Ontario, Canada, December 16, 1845. After his graduation from the Lewiston M. E. College of Eclecticism and one term at the Rush Medical College, Chicago, he located at Elwell.

His wife, one daughter, one son, and two sisters survive him.

The death of **Doctor F. W. Wilson**, Muskegon, not a member of the State Society has been reported to this office.

Doctor George Campbell of Detroit, Michigan, died at Pasadena, California on April 16th at the age of 60 years.

Doctor Campbell had practiced medicine in Detroit for 33 years having graduated from the

Detroit College of Medicine and Surgery in 1887.

Surviving are the widow and one daughter.

Doctor Chauncey E. Koon, 812 Lake Drive, Grand Rapids, Michigan, died Tuesday evening following a brief illness.

Doctor Koon was born in 1848 at Allen, moved to Casnovia and then to Grand Rapids where he has been a resident for twenty-one years. Doctor Koon served during the Civil War with the Michigan volunteers.

He was the father of the late Doctor Thomas Koon, former health officer of Grand Rapids. Doctor Koon is survived by one son, William A. Koon, of Minneapolis, Minn.

State News Notes

Well established practice, 12 miles from Flint, Mich., on Dixie Highway. Steam and electric railway, good schools and churches; roads gravel or cement, thorough introduction. Can turn over several old line insurance appointments. Competition small, consisting of one man, located only one week. Village 2500, very good farming country. Leaving on account of poor health. Address care Journal for full particulars.

General practice and drugs, unopposed village practice and only one drug store, rich farming community, good schools, roads, and churches. Collections in 1919 over \$9,000.00 Monroe County, Edison lights, Rexal Agency. Contents of drug store for sale. Care Journal.

AMERICAN PUBLIC HEALTH ASSOCIATION TO CELEBRATE 50TH ANNIVERSARY.

Next year the American Public Health Association will conduct its 50th annual meeting. An interesting circumstance is that Dr. Stephen Smith, the founder and first president of the Association, will at that time be approaching his 99th birthday. Dr. Smith is still hale and hearty and possesses his faculties to a remarkable degree. It is his intention to read a paper at the meeting referred to. His vigor at a ripe old age exemplifies the results of sane living.

The American Public Health Association was founded at New York City in 1872. Until a few years ago it remained a strictly scientific body, somewhat on the order of the royal societies of Europe. More recently the membership has been broadened so that those may join who have a

more general interest in public health, including such workers as health officers, laboratory men, school medical inspectors, industrial hygienists, public health nurses, physicians interested in preventive medicine, etc.

Dr. R. M. Olin is chairman of the committee on membership for the state of Michigan. Those interested in the objects of the Association are invited to correspond with him.

Members of the Association receive the American Journal of Public Health and the A. P. H. A. News Letter monthly, together with the customary Association advantages. Dues are \$5 per year.

The American Public Health Association stands as an honored institution which during the years has been tremendously influential in bringing the new methods of public health into use. Certainly no health worker can afford not to be a member, or to miss its publications.

The rapid growth of the American chemical industry is indicated by the announcement that the Abbott Laboratories have recently purchased twenty-six acres of ground in North Chicago and will soon commence building an additional plant for the exclusive manufacture of synthetics and other chemicals.

Physicians and pharmacists are enthusiastically encouraging the idea of American independence in pharmaceutical and chemical lines.

The Abbott Laboratories is a leader in developing, under government license, such important products as Barbital, (Diethylbarbituric Acid), Cinchophen and Procaine. They are also supplying Anesthesin, Dichloramine-T, Chloramine-T, Nucleinic Acid, Colchicine, Hydrastine, Sanguinarine Nitrate, Lecithin and other chemicals. Some of these have been included and will be shown at the Scientific Exhibit of the American Association at New Orleans in April.

A subscription dinner was given at the Medical Bldg., Detroit, to Doctor J. H. Carstens by the Wayne County Medical Society on Tuesday evening, April 23, 1920. There were over 200 present. The President, Doctor George McKean, acted as Toastmaster. The following physicians talked on the life and work of Doctor Carstens: Doctors Daniel LaFerte, T. A. McGraw, Guy L. Kiefer, W. P. Manton and John Bell. This dinner was given to celebrate the fifty years of continuous practice of medicine of Doctor Carstens.

A conference of U. S. P. H. physicians engaged in war relief and compensation work was held in Cadillac April 15th. In the evening the Tri-

County Medical Society tendered a banquet to the visitors.

Dr. R. B. H. Gradwohl, the announcement of whose St. Louis Biological Laboratories has appeared in the columns of this Journal, has opened a Chicago Laboratory, and has taken a suite of rooms in the Chicago Savings Bank Building, corner Madison & State Sts., Chicago, Ill.

This Laboratory is supplied with the very latest and best equipment for rendering physicians efficient service. Dr. Gradwohl's announcement with complete information as to his Chicago office, appears on another page of this issue.

The following is an additional list of physicians elected as Fellows of the American College of Physicians: C. B. Burr, M. S. Knapp, W. Clift and W. H. Marshall of Flint; Collins H. Johnston of Grand Rapids.

Dr. Irwin H. Neff, formerly of the Pontiac

and Kalamazoo State Hospitals, has opened offices at 32 Adams St., Detroit, with practice limited to neurology and psychiatry.

Just review again the program for our annual meeting and note the men who are to be present from out of the State. Can you afford to miss hearing them?

The practice of the late Dr. J. C. Black of Milford, is open and good location for sale by the estate of the doctor.

Dr. J. H. Powers of Saginaw has been appointed local health officer.

Dr. Wynand Pyle has located in Grand Rapids, with practice limited to Gynecology and Obstetrics.

Dr. D. A. Cameron has been appointed health officer of Alpena.

COUNTY SOCIETY NEWS

It is the Editor's desire to have this department of the Journal contain the report of every meeting that is held by a Local Society. Secretaries are urged to send in these reports promptly

ALPENA COUNTY.

The regular meeting of the Alpena Medical Society was held Thursday, March 17, in the parlors of the Alpena House. Drs. Dunlop, Bertram, Secrist and Foley were the hosts at the dinner which preceded the program. Dr. C. M. Williams read the paper of the evening on the diagnosis of syphilis. The reflectoscope was used to illustrate the various stages of the disease, emphasis being placed on the general mildness of the symptoms, and the necessity of looking on every pimple of the genitalia with suspicion. Likewise the secondary symptoms are often overlooked on account of their apparently trivial character. The importance of the darkfield to assist in the early diagnosis by the microscope was illustrated. Next meeting April 15 in the evening.

The Secretary.

GENESEE COUNTY.

The Genesee County Medical Society met on Wednesday, March 31, Vice-President Winchester presiding. Dr. George A. McKean of Detroit, gave an address on "Encephalitis Lethargica."

As several cases have occurred in this locality, and as few doctors have had an extensive experience with the disease, this subject proved very interesting. After a brief resume of the history of Epidemic Encephalitis, the speaker gave a very clear description of the symptoms and signs, discussed the prognosis and outlined the principles of treatment. Dr. E. R. Wittwer, of Detroit, was introduced and discussed the Etiology and Pathology of the disease. He had a fine collection of lantern slides showing the Histo-Pathology of several fatal cases. Of special interest was his description of the experimental work conducted in Detroit by Dr. Plin Morse and himself. In the discussion which followed, many of the members expressed the opinion that they had seen cases, but had failed to diagnose them correctly. Such a meeting as this, shows the educational value of the county medical society.

W. H. Marshall, Secretary.

The Genesee County Medical Society met on April 14, Vice-President Winchester in the chair. Dr. Howard Cummings of Ann Arbor read a paper on "The Modern Care of the Obstetric Patient." It was a surprise to learn that in 13

other countries the mother and child had a better chance than in the U. S. A. He made an earnest plea for more careful Obstetrics, and dealt with the details of ante-partum and post-partum management. In the discussion, Dr. DeKleine told of what we were trying to accomplish in Flint in this matter. A clinic for ante-partum examinations and advice has been started at the Health Center under the able direction of Dr. Lucy Elliot.

Dr. Blakely, of Flint, read a carefully prepared paper on "Injuries of the Knee-Joint." He told how many of them were diagnosed as "Rheumatism" and showed how simple it was to make an accurate diagnosis.

W. H. Marshall, Secretary.

GRATIOT-ISABELLA-CLARE COUNTY.

The April meeting of the Gratiot-Isabella-Clare was held in Brainerd Hospital, Thursday April 15, at 2 P. M.

In the absence of President Lamb and Vice-President Pullen, Dr. L. J. Burch was called to the chair.

Dr. L. J. Burch was elected delegate, and Dr. C. M. Baskerville, alternate to the State meeting.

A committee was appointed to consider and report at some future meeting on the question of "Social and Industrial Insurance."

Dr. E. M. Highfield read a report and showed a case of mycosis fungoides.

Dr. C. F. DuBois reported a case of tubercular meningitis in a boy of 17.

Dr. E. H. Foust then read an interesting paper entitled "Roads." Not the roads we drive on, but the 'Roads' of experience to a successful medical practice.

This paper brought out a prolonged discussion of "Group Medicine" and county hospitals. There was a general agreement that we need county hospitals, but how to form the staff was not so easy to settle.

E. M. Highfield, Secretary.

GRAND TRAVERSE-LEELANAU COUNTY.

On April 1, 1920, Prof. Udo J. Wile of the University of Michigan gave a clinic on Dermatology at the Traverse City State Hospital before the Grand Traverse-Leelanau County Medical Society. There were present also physicians from the following counties: Emmet, Charlevoix, Antrim, Kalkaska, Wexford and Benzie. Many interesting cases were demonstrated and discussed in a very instructive manner. In the evening at a dinner given at the Park Place

Hotel, Traverse City, in honor of Prof. Wile, there was formed a "Northern Michigan Clinical Association." All physicians in the 9th district and in Antrim, Charlevoix and Emmet counties are eligible to membership. The intention is to hold meetings about every three months and to secure speakers of national reputation. The following were appointed a committee to draw up a constitution and by-laws: Dr. F. Holdsworth, Traverse City, Mich., Dr. B. H. Van Leuven, Petoskey, Mich., Dr. O. L. Ricker, Cadillac, Mich. H. V. Hendricks, Sec'y-Treas.

SHIAWASSEE COUNTY.

A meeting of the Shiawassee County Medical Society was held at Owosso on Tuesday evening, Mar. 30, 1920. A good dinner preceded the program for the evening, and after satisfying the wants of the inner man, the business of the evening was taken up.

Dr. W. T. Parker, of Owosso, read a very instructive paper on personal experiences with perforating ulcers of the stomach and duodenum, giving detail of case histories which were valuable.

Dr. J. J. Haviland, of Owosso, addressed the society on the prevention and treatment of whooping cough by the vaccine treatment as he had observed it in the practice of specialists in this particular line, also his personal experience with the same.

A full discussion of the papers followed which was very helpful. A good attendance of doctors was present, and all felt well repaid for coming.

W. E. Ward, Sec'y-Treas.

Book Reviews

MODERN SURGERY, General and Operative, by J. Chalmers Da Costa, M.D. Samuel D. Gross, Professor of Surgery, Jefferson Medical College, Philadelphia, Eighth Edition, Revised, Enlarged and Reset. Octavo of 1697 pages with 1177 illustrations, some of them in colors. Philadelphia and London: W. B. Saunders Company, 1919. Cloth, \$8.00 net.

We have always been pleased to welcome each succeeding edition of this work because it has always recorded the progress of surgery and in a measure its eight editions serve as a surgical history. Secondly, we always find how and where we may employ the newer technic to best advantage. Third, it is wholly devoid of fads and frills. In spite of all the many works on surgery, and reliable ones at that, we find ourselves ever returning to this text for the final summing up of the condition and treatment for which advice is sought.

Nothing further need be said in review of this latest edition. Its presence in the library of a surgeon or physician is indicative that the owner is possessed of the latest information to aid him in his practice.

PRINCIPLES AND PRACTICE OF PHYSICAL DIAGNOSIS. By John C. DaCosta, Jr., M.D., Ex-Associate Professor of Medicine, Jefferson Medical College, Philadelphia. Fourth Edition, Thoroughly revised. Octavo of 602 pages with 225 original illustrations. Philadelphia and London: W. B. Saunders Company, 1919. Cloth \$4.75 net.

Physical Diagnosis, the study of which commenced in our Sophomore year and only ends when we retire from practice determines our ability as practitioners or as merely peddlers of pills. The exactness and refinement of this skill has progressed and continues to progress. He who still relies upon his school text book is far in the rear of the ranks of up-to-date progress.

This fourth edition of DaCosta's Physical Diagnosis is indeed a most meritorious text. Clear in descriptive text, concise in points of details, instructive in methods employed, definite in the conclusions reached from the physical findings detected, one finds extraordinary assistance and profit in reading the several chapters.

With the latest opinions and progress in diseases of the lungs, heart, gas-edema, gas-pneumonia, influenzal pneumonia, effort syndrome, aviators heart, the mobile cecum and other physical disease in which much progress has been made in the last two or three years, we are indeed presented with a text that becomes extremely valuable and a necessity to every physician, surgeon and specialist.

The securance of this text should be the aim of every one of our readers, if they wish to remain abreast of the progress made in physical diagnosis.

THE DISEASES OF INFANTS AND CHILDREN by J. P. Crozer Griffith, M.D., Ph.D., Professor of Pediatrics in the University of Pennsylvania. Two octavo volumes totaling 1542 pages with 436 illustrations, including 20 plates in colors. Philadelphia and London: W. B. Saunders Company, 1919. Cloth, \$16.00 net.

These two volumes present a rather pretentious and thorough discussion of the diseases of infants and children consistent with the progress that has been made.

Complete in the subjects discussed and still not encyclopedic in form, there is presented to the reader that information and instruction that he requires to aid him in intelligent diagnosis and treatment of childhood diseases and derangements.

The method of presentation is pleasingly uniform and once familiar with the text one can quickly secure the information sought.

All that is obsolete is omitted, or only mentioned to condemn, hence one does not purchase pages that are of no value or use. One finds that which he desires and is satisfied because he obtains practically the last word upon the subject.

This work at once assumes a leading position in our authoritative texts and enriches our reference resources.

The problem of infant and children welfare is now a verbal one in every community and the subject of consideration and activity as to safe guarding. The physicians in every community are being called upon to aid in campaigns that are being undertaken. If he is to assume a constructive part, if he is to advise intelligently, if his recommendations are to be modern and consistent with our present day knowledge he must be possessed of this work and must acquire the knowledge therein imparted.

POPE'S MANUAL OF NURSING PROCEDURE. By Amy E. Pope, formerly Instructor of Nurses, Presbyterian Hospital, New York. Price \$2.00. Putman Co.

This is an admirable discussion of basic principles, set forth in such a form as to aid in the work of giving instruction to pupils in training schools. It bids fair to become a popular work in all of our training schools.

Our only criticism is the crudeness of its illustrations, for after all good illustrations add to the clearness of the text and simplifies the student's studies.

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SOCIETY YOU CAN
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Consignments of digitalis leaves received during the past few years showed a pronounced variation in activity when tested physiologically. One lot was three times as potent as the standard. Two others were respectively one-fourth and one-half as potent.

Recently a quantity of belladonna leaves was examined that assayed two-thirds of the desired strength. Another lot was twice as potent as the recognized standard. Several lots of aconite showed as much variation in activity as 400%, and hyoscyamus, on different occasions, varied as much as 500%.

Standard preparations of variable drugs, such as those mentioned, are made by increasing or decreasing the amount of raw material used in the manufacturing process.

Some time ago it was impossible to get strophanthus of good quality. The commercially available drug, when tested physiologically, proved to be only one-fourth as potent as the standard requirement. As a result, it was necessary to use four times the usual quantity of drug to make a product that would conform to the specifications of this house.

Methods of testing therapeutic agents are being devised and improved constantly in our scientific laboratory. Frequently there are no charted paths to follow—no established methods of determining the potency of drug products. In such cases we proceed to devise standards. A biological product for the control of hemorrhage was developed recently. How could the activity of the preparation be determined? And how could the product be adjusted to a uniform standard of activity? A physiological test was devised—a test which specifies that this hemostatic must shorten the coagulation time of the blood to at least one-third the normal for the test animal used.

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APPLICATION FOR MEMBERSHIP

IN

The _____ County Medical Society

Branch No. _____ of The Michigan State Medical Society

I hereby apply for membership in the _____
County Medical Society, Branch No. _____ of The Michigan State
Medical Society, and agree to support its Constitution and By-Laws, and
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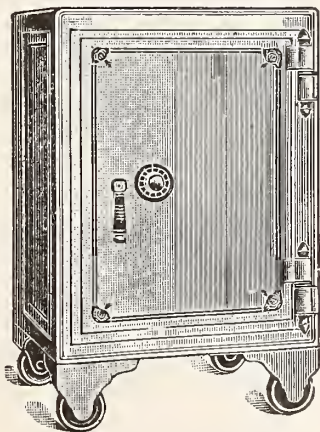
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Arizona	1										1	
California	1						1				2	
Colorado									1	1	1	1
Florida			1	1							1	1
Georgia					1	1					1	1
Idaho			1	1							1	1
Illinois	2	1	4	1	6	2	9	3	7	2	28	9
Indiana			8	2	2		1				11	2
Iowa			7	1	4	1	3		3	1	17	3
Kansas									4	1	4	1
Kentucky			2	1							2	1
Massachusetts					2	1					2	1
Michigan	6	2	3	2	2	1	1				12	5
Minnesota	2	2	5				10	6	2	1	19	9
Missouri					1	1	2	1			3	2
Montana							1	1			1	1
Nebraska			2		1		3	1	1		7	1
New Jersey			2						1		3	
New York			2		1						3	
North Carolina			1								1	
North Dakota	2	1	2				2	2	2		8	3
Ohio	2		3		1						6	
Oklahoma	1	1			1						2	1
Oregon	1										1	
Pennsylvania	1	1	3	1	2		4		1		11	2
South Carolina									1		1	
South Dakota							1		1	1	2	1
Vermont							1				1	
Washington	1										1	
Wisconsin	1				2	1	2	1			5	2
Canada			1	1					1	1	2	2
	21	8	47	11	26	8	41	15	25	8	160	50

RECAPITULATION.

	1913	1914	1915	1916	1917	Total
Fatal	8	11	8	15	8	50
Recovery Doubtful		6	4	3	3	16
Recovery Probable	12	31	14	23	14	94
	20	48	26	41	25	160

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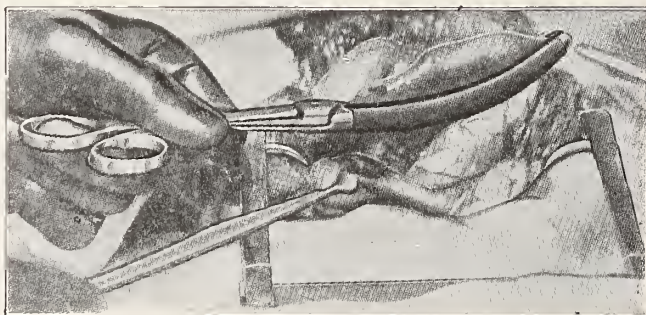
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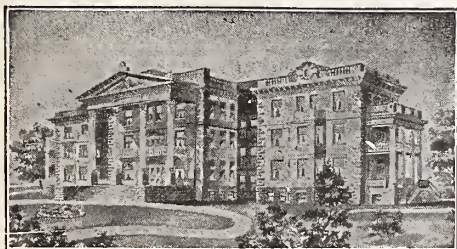
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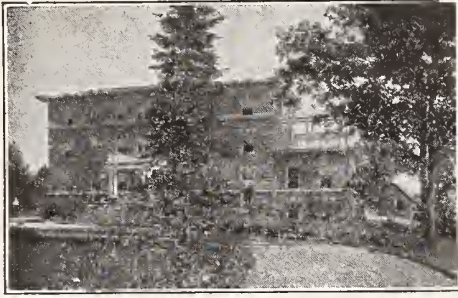
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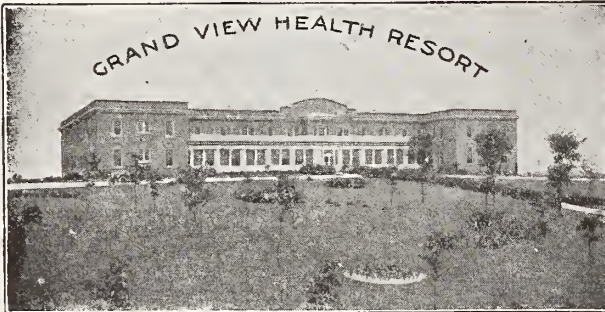
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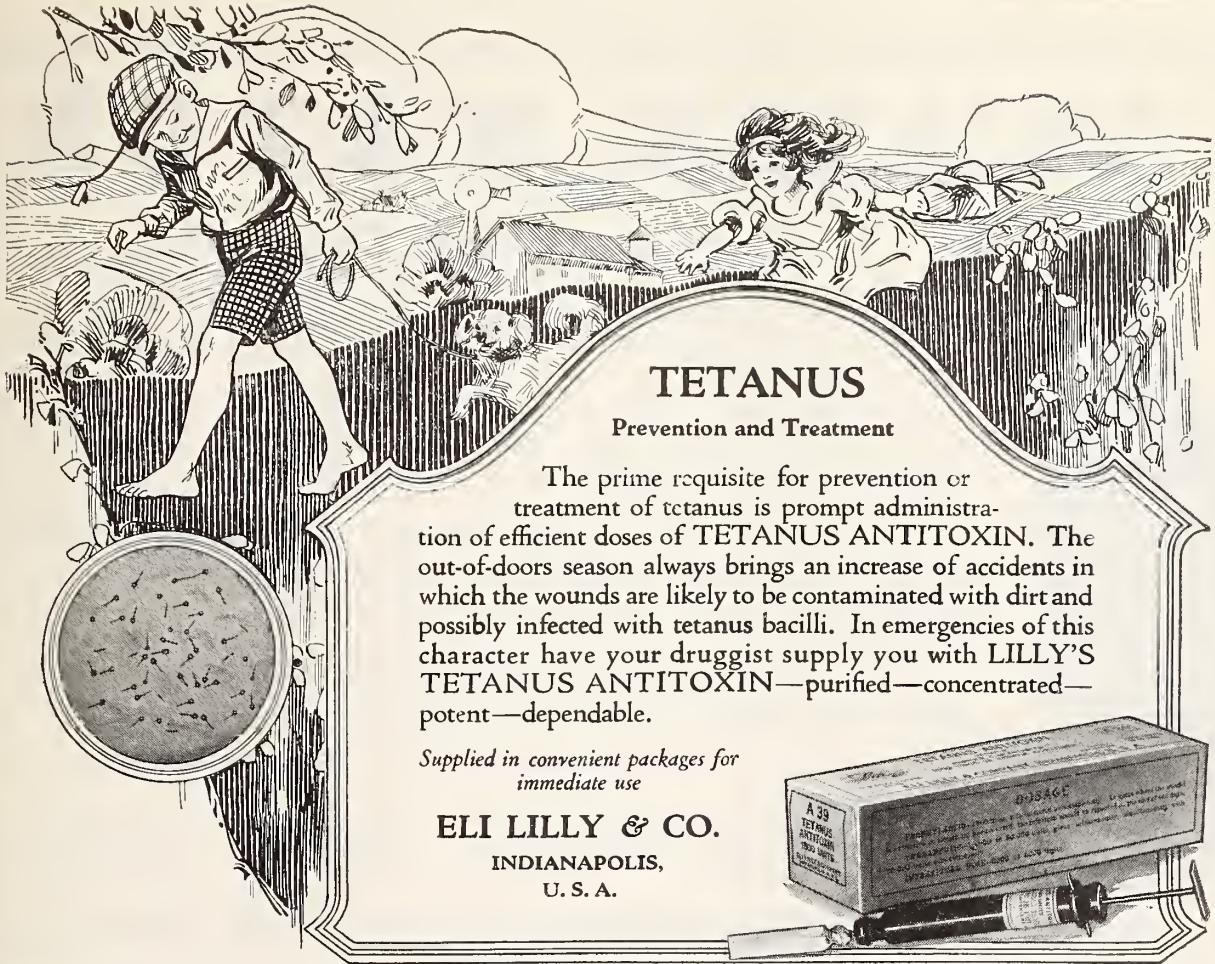
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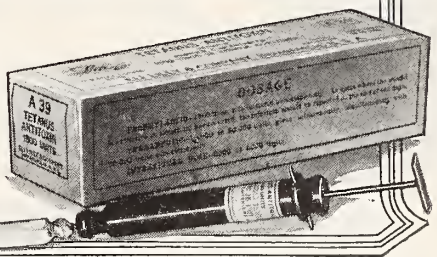


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THE EFFICIENT DOSAGE IN DEEP ROENTGEN THERAPY.

ROLLIN H. STEVENS, M.D.,
DETROIT, MICH.

The Editorial in the Journal of Feb. 1920 concerning dosage in x-ray therapy prompts me to write this paper.

There is no question that too conservative treatment of malignancy can only result in failure. We can unhesitatingly state also that such treatment not only results in failure, but does more—stimulates the growth to greater activity in many cases. We can also agree in part with the Editor that moderate x-ray burns of the skin following treatment of malignancy should not give much concern. However, this latter statement is a pretty radical one that should not be handed out indiscriminately to the average inexperienced x-ray operator. X-ray burns are often serious matters and make the patient worse off than does the cancer, and secondary cancer oftentimes develops in burns. A burn involving a moderate area of skin could be cut away if necessary, if in an area situated favorably for such operation, and not too extensive.

There is a vast difference in the action of x-ray or radium on the various types of malignant growths. The same is true with any kind of treatment now known. The more highly differentiated the type of cell from which the growth develops the less responsive it is to treatment. In these cases even the dose that seriously burns surrounding normal tissue may not succeed in destroying the malignant growth, and the pain resulting from such treatment may be most excruciating and last for months. Such areas should be promptly removed preferably after electro-coagulation. Relief from pain is then immediate.

The results of x-ray and radium therapy are both local and constitutional. They are

also primary and secondary. These actions of the rays must be studied and differentiated in order to appreciate the value of radiotherapy. In this brief paper we can not do more than call attention to a few of the more important features of these radioactions.

Local Action: The local action of either radium or x-ray in efficient cancer therapy dosage is to profoundly affect all the cells, the normal cells in the neighborhood as well as those comprising the growth, or those made more or less sick by the toxins of the malignant cells. There is primarily more or less intracellular and intercellular oedema. The blood vessels and lymph spaces are dilated. There is perivascular round cell infiltration. Macroscopically, there may be a slight erythema for the first few hours. This varies greatly in different cases. Sometimes in heavy dosage this erythema persists, a true dermatitis appearing in two to five days. The whole tissue becomes more or less swollen. This swelling may be accompanied by temporary increase of pain due to pressure, or the pain may be relieved.

Secondarily, after a few days, the diseased cells balloon more and more; the protoplasm breaks down; the nuclei are separated, and absorption of the cell takes place. The normal cells go through a process similar to an ordinary dermatitis. Parakeratosis takes place and the cell is cast off as a squame. The blood vessels and lymph spaces become much contracted and fibrosis follows in a few weeks. Macroscopically in this secondary action of the heavier dosage the skin assumes a reddish brown color, becomes rough and scaly. The skin may remain pigmented a long time, but usually assumes a more normal condition in about four to six weeks. The degree of pigmentation, of course, depends upon the type of skin—whether fair or brunette.

We have seen infections develop in the treated areas of the skin during the primary reaction. The skin is undoubtedly more sensitive to infection at this time.

Constitutional Action: The breaking down

and absorption of the cancer cell—with its causative germ, if there be one, and the evidence is strong for this, no doubt, makes some changes in the blood, the real nature of which we do not now understand. Every normal cell has its secretion which plays a role in the general health of the individual. When this cell is modified, but not destroyed as is the cancer cell by x-ray therapy, there are then, no doubt, changed secretions which still further modify the chemistry of the blood. Crane, about ten years ago, showed how the x-ray therapy of acne modified the opsonic index just as do injections of bacterial vaccines.

We have shown how deep x-ray therapy of cancer causes immediate marked diminution of leucocytes, particularly the lymphocytes, and their recovery does not take place for about two weeks. The curve of their fall and rise resembles that of the opsonic index.

Probably as a result of these primary changes in the blood we often have constitutional symptoms of mild or severe character. The patient sometimes begins to feel badly during the exposure to the rays. There may be simple anorexia or nausea and vomiting. These symptoms may last only an hour or so or persist for two or rarely for three weeks. The muscles often feel sore, bruised and aching for a few days after the treatment. There may be headache. Some patients say they feel all right so long as they lie down, but they become nauseated the moment they get up. Pain which had been present before the treatment may be increased or diminished, usually the latter.

Secondary: In about fourteen days the leucocytes have fully recovered. There is now usually a slight or marked increase in the lymphocytes. If pain was increased primarily by the treatment, it usually subsides in a few hours or days. The patient usually feels much better generally after seven to fourteen days. We believe the changes noted in the blood and in the general clinical condition of the patient two weeks after treatment indicate an attempt on the part of the organism to develop immunity against cancer. This immunity is usually of a more or less temporary nature it is true, but nevertheless an immunity. Cancer may not be wholly local in the beginning as we are taught, but a systemic disease and the growth itself but a local manifestation. Growths have been treated in one portion of the body and other growths untreated in the same individual have at the same time improved

thus suggesting an immunizing action of the ray.

Therefore, in treating cancer we must ever bear in mind the local and constitutional actions of the ray, the primary and secondary action and the effects of light and full doses of x-ray and radium, which latter I have not differentiated in this paper. I am very certain many patients have been killed by the x-ray in large doses, particularly where heavy doses have been given over the stomach for cancer of that organ. We must therefore use much judgment, which can only come with experience in dosing cancer with x-ray or radium. Some cases, I have no doubt, should receive many times the erythema dose in limited areas, and this be followed by operation to remove the area thus destroyed, otherwise the local irritation and pain suffered may seriously undermine the patient's resistance and the growth redevelop and spread with great rapidity, in spite of further treatment.

In the treatment of breast cancer we believe the best interests of the patient are conserved by careful and thorough deep therapy of the growth, and the afferent and efferent lymphatic system over a period of several weeks, several series being given two to three weeks apart, before operation is done. And then the operation should be limited almost wholly to the original growth, leaving the slightly affected axillary glandular system to the x-ray treatment. Perhaps nodules of the size of an almond or larger might better be removed. The secondaries of cancer generally respond to x-ray and radium much more readily than do the primaries. Swelling of the arm from obstruction of the lymphatic circulation is common on the operated side after amputation of the breast because of too radical an operation. In one of these cases where recurrence took place after operation and subsided under x-ray treatment, the arm remained much swollen and very painful, and was finally only relieved by amputation at the shoulder.

The skin absorbs the greater amount of x-ray given in therapy of deep tumors and the underlying tissues a comparatively small proportion. Drs. E. Beek and Paul Eisner have shown that and they report remarkable results from the combined operation and x-ray treatment of large so called inoperable carcinomatous areas by this method. However, great care must be observed even here, both because of local and constitutional effects.

Intoxication from absorption of broken down proteid matter following x-ray treatment has

often been noted as described above, and sometimes it is fatal. Dr. E. Beck in conversation with me recently, reported such a case treated in a western hospital. In this case the circulation of three or four ribs in the x-ray field was so much interfered with that large portions of the ribs died and dropped out through the area denuded of skin by operation, and the patient died of the x-ray intoxication. So we may do serious damage to important underlying structures by too heavy x-ray doses causing endarteritis of important vessels, especially in the region of the trunk.

Some x-ray operators in advocating pre-operative x-ray treatment of cancer have advised the giving of one series of deep x-ray, crossfiring treatments, and operation soon after—even the day after. They argue that if the cancer cells receive a “lethal dose” of the x-ray, one does not need to wait for their absorption before operating. The cells will die no matter where they are carried.

The objections to this practice are many. One series of x-ray has never in my experience been sufficient for a “lethal dose” to all cancer cells of a deep seated growth like cancer of the breast. We do not know what a “lethal dose” for all the cells at varying depths is. The lethal dose of cells is not the only consideration of x-ray therapy. For several days after x-ray treatment the tissues in and about the growth are more or less oedematous. The blood vessels are primarily dilated and the circulation more or less stagnated. Thus the tissues bleed much, they are much more susceptible to infection and will not heal well. Surgeons who have operated on cases thus early after x-ray treatment have told me they much preferred not to have x-ray treatment before operation. The lymphocytes are much diminished and during this time the general resistance of the patient consequently is much reduced. In our opinion the operation might infinitely better be done without x-ray treatment than be done earlier than two weeks after treatment.

After two weeks the skin has passed through the primary irritation and is in better condition for healing, the lymphocytes have recovered and the patient's resistance thereby improved. The blood vessels and lymph spaces are beginning to contract and fibrosis to develop. Consequently there is perhaps less haemorrhage than normal. If three or more series of x-ray treatments are given three weeks apart and the operation done three weeks after the series, this latter advantage is quite marked, and surgeons have frequently remarked upon the

slight amount of haemorrhage in such cases. Adhesions of the tumor to the muscles beneath have also been noted to be less than expected in cases so treated.

X-ray and radium are perhaps the best agents we have today for the treatment of cancer, but they are not and probably never will be found to be specific for all types of malignancy.

The nearer the cell approaches the highest differentiated type the less sensitive it is to the action of the rays, the squamous—celled growth, accordingly, being most resistant. Growths of this type and others not responding to x-ray or radium should be destroyed by electro-thermic (diathermic) coagulation according to the method of Wm. Clark of Philadelphia, using nearly an ampere of d'Arsonval current (bipolar) with the patient thoroughly anesthetized. The growth is first blocked by inserting the needle connected to one pole of the d'Arsonval current into the tissues all about it, a few seconds in each place, till the tissues are cooked, and then throughout the growth itself until the whole is cooked. It is then curetted or cut away. The resulting wound heals kindly leaving a smooth scar. Recurrences are not frequent in the neighborhood, at least within several months or years. Squamous-celled growths, however, metastasize early and x-ray treatment should be intelligently carried out for some time to the afferent and efferent lymphatic systems.

In conclusion, the successful use of x-rays or radium in cancer depends upon the following:

1. A maximum dosage that is safe for the life of the overlying and adjacent normal skin and the underlying important structures, but destructive to the less resistant malignant cell. This dose is difficult to determine. It varies with the type of individual treated, and the type, location, extent and depth of the growth. This dose is given through a series of several ports in such a manner that the deeper parts are crossfired by the ray. This is called a “series dose.”

2. The series-dose must be divided and given in intervals of twenty-four hours or more till complete, in order to avoid too severe intoxication from proteid absorption.

3. The series-dose must not be repeated until the skin and the blood have recovered from the effects of the previous series, i.e., two to four weeks for x-ray, four to six weeks for radium.

4. Operation should not be done after x-ray or radium therapy until the local sound tissues and the blood have had a chance to recover

from the primary action of the rays, i.e., two to four weeks.

5. Several series of x-ray treatments previous to operation, and extending over several weeks are better in the average case than one series of treatments. Contrary to the usual teaching I am long since convinced that there is no occasion for a hasty operation in the average case of cancer.

Time spent in x-ray or radium treatment before operation is not time lost, but may mean the saving of a life in comparative comfort for a much greater period than if the operation were done first.

6. Electro-coagulation, where it can be employed, in operation often prevents recurrence for many months or years. We believe it should be used much more frequently in operations on cancer.

7. Post operative treatment, of course, should be kept up for several months.

8. Where thorough pre- and post-operative radiotherapy in cancer is made use of a much more conservative operation may be done, entrusting the neighboring lymphatics to the radiotherapy.

HETHOPHORIA AND HETEROTROPIA.*

WILL WALTER,

CHICAGO, (EVANSTON) ILL.

I do not know that I bring you any special message on ocular balance—rather imbalance—in response to the kind invitation of your program committee. The subject is a complicated one, and many viewpoints are necessary. Often men in discussion, are expressing the same views in varying terms.

Some different—perhaps original—conceptions of basic principles have been evolved which may be of interest to view. Our discussion will therefore be very general and is based upon what may be called a psycho-physiologic view point.

NORMAL BALANCE of the globes under control of the extra ocular muscles is desirable for several reasons.

First: For binocular single vision—when possible. This presupposes the functioning of both eyes for better seeing and is present only when sufficient vision exists in a fellow eye to help by fusion of its image with the fixing eye. If the visual axes are parallel, binocular vision is better than monocular even though one eye carries a much lower acuity. In this case the poor

seeing—or as we shall call it, the trailing eye—gives steadiness by periferal stimuli when central vision is low, and probably always by motor impulses, the quickened mental aptitude which goes with the use of two symmetrical anatomic body elements over one alone. This is easy of verification in daily tests.

We have come to believe that even with equal and normal vision in both eyes, one eye is fixing whilst the other is steadying and aiding by adjuvant impulses of retinal and motor stimuli. In right handed subjects it is usually the right eye which fixes and the left which trails, whilst in the left handed the left eye leads and the right does the reenforcing. Assuming equal vision in both eyes, there are few exceptions to this. You are of course familiar with the hole in the card test but I would be pleased to have you test it in your own cases as a matter of interest, if you have not tried it, and find whether you are right eyed if right handed or left eyed if left handed.

A study of ocular rotations in normals gives evidence that this is of some importance. It will be found by the tropometer that there is more power of adversion in the left eyes of right handed subjects and more in the right eyes of left handed subjects. If right handed subjects are habitually right eyed, fixing as they do with the right eye in the primary position, and looking straight ahead—which they also do—causes the left eye to be adverted to fix upon the same object; and the more so the wider the P. D. and the nearer the object is viewed.

Coincident with this, I have observed that there is a tilting outward of the vertical meridian of the trailing eye. This seems to me is the explanation of the frequent finding of a “plus declination” of the left eye which Stevens has thought to be due to the greater development of the left hemisphere in right handed subjects. I have come to regard an outward tilt of the trailing eye, and greater adversion, as a normal finding; and I am influenced in my choice of muscles for operating by this factor. Our habit of gaze is below the horizon and toward the median line, and the summation of this training leads to the tilting. Our rotations as you know approximate 35 degrees upward and 50 degrees downward, 45 to 50 degrees outward but 50 to 55 degrees inward.

The second reason for ocular parallelism is comfort. Parallelism may exist under stress with perfect binocular vision but with discomfort. This may be manifest to consciousness or it may not. When it is not, its efforts are of

*Paper read before the Michigan State Medical Society, May, 1919.

the most subtle type. There may be as you know any degree or phoria or tropia in subjects without complaints, but the effects nevertheless lie deeply upon the central nervous system and are evidenced in more or less remote muscle tensions or relaxations and attitudes of body and mind. They show in head poses which are marked in the hyperphorias, or in facial—especially frontal—lines and grimaces most noted in hyper-eso- or hyper-exophorias; or in the deep vertical forehead lines and in the stooping posture and half bent knee of esophoria and in the esotropia subject when vision is fairly equal in both eyes.

In a paper before the Ophth. Section of the A. M. A. in 1916 I linked up the ocular movements with the automatic or so-called vegetative nervous system. To this we shall refer later. What I wish to call your attention to now is that this system is automatic, is independent of our wills and is in general acted upon in all of its ramifications by similar stimuli. This nervous system, as you know, presides over all of our fundamental functions, circulation, respiration, the cardiac rhythm, gastro enteric peristalsis, the ductless glands; and extends in general where control by volition would be hazardous, slow and impossible.

There is either normal tonus when everything is in balance or overtonus resulting in excessive contractures, broncho spasm, acceleration of pulse during respiration, and it is everywhere relaxed by atropin; or there is undertonus which is stimulated by pilocarpin or on occasion by adrenalin or by strychnin. We link accommodation and convergence into this system and make overtonus or over stimulation on one element lead to overtonus on the other.

A study of this tells us several things but one which seems to have missed attention, viz., that an hyperopia and an associated convergence excess or an esophoria, or an esotropia must, by laws governing the correlation of elements of this nervous system, react upon its other elements. This offers another, perhaps less complicated, explanation of the associated posture, the bent knee, the closed countenance, the enteroptosis so often found in these cases; and percontra, a low accommodation and convergence stimulus, with exophoria or exotropia, lead to the reverse of this—the open countenance, the erect posture and all that.

The most uncomfortable subject of all is the myope with esophoria or the hyperope with exophoria, for he is in perpetual neural discord: two sides of the automatic nervous system always in conflict.

The third reason for parallelism is for appearance, and this applies to the phorias in minor measure.

DISCUSSION.

I would have you think of the influence of the actions and reactions over this fundamental mechanism. It goes on independent of our volition.

We may will to look in any direction or even to converge our eyes, and we know that the frontal lobes have this control over the direction of our gaze. But this volitional control occupies a secondary pathway, when an alarming sound, an ominous odor or a surface irritation—an automatically acting stimulus—takes the pathway. Otherwise there would be no existence for us, because volition is too slow for defense. This is not speculative, it is demonstrable. For if the frontal lobes are removed or disconnected there is a reversion to the infantile ocular movements—inability to fix the gaze—but there is no lack of parallelism. The binocular functions are disturbed; but only temporarily, since definite movements will follow when the gaze falls upon food or when sound or some other stimulus attracts. Movement is then purposeful.

Independent Influence of the Autonomic System.—The vegetative system is not infallible and may go wrong, and hence persistent undertonus or overtonus may exist independent of errors of refraction, and such a condition, either as a disorder of automatic function or as an atavism, would explain exophorias in some cases. This may begin early in life, as convergence insufficiency from lack of tonus, and go over to divergence excess or even to exotropia.

This seems a reasonable hypothesis in the etiology of exophoria or exotropia. If this is so, hope is offered through the study of the stimulation of tonus over the automatic nervous mechanism.

APPLICATION.

But you ask, has this discussion any bearing upon our real problem—that of correcting these imbalances? It seems to me to have most elemental influence.

Child study experts tell us that the real formative period is before the fifth year of life. Action stimuli sink deeply into the delicate nervous structures, and the eye covers a large area in this field. Hyperopia and convergence stimulation or myopia with the lack of it are bad; anisometropia is worse. No one can esti-

mate the evil influence of these elements in the formative period of life.

If this reflex organization is out of tune, the whole structure suffers and we have added reasons for setting them in order as early in life as possible.

I have made the statement that anisometropes should be born "with glasses on" to aid in the early correlation of the eyes. The earliest we can correct is not early enough. If one eye is poor in vision or out of action, it will not fix, suppression of vision will be the way out, and the then effect is divergence or convergence or some combined deviation. This deviation is always in the line of the dominant pull—a physical anatomic effect in these cases—and the long train of contractures or stretchings is in action.

Hysterical effects are never manifest in imbalance, they are always disorders of associated movements. They are in the high level of control, whilst imbalance lies always in the mid or lower levels.

Hyperopia and ciliary over development, esophoria and esotropia, represent the positive side of this mechanism. They are akin to compensatory cardiac action. The negative side of the mechanism is underdevelopment or dystrophy, exophoria or exotropia, negative or underconvergence or divergence excess. These are akin to loss of cardiac compensation.

One may see the need of correcting errors of refraction before the period of training of co-ordination is passed. They are generally well established by the sixth year of life. By this means there is a chance to forestall the overgrowth or undergrowth which, once developed, tends to perpetuate itself under habit impulses. The end-result of relative over-stimulation or understimulation over the ciliary arc during the development period, will be a phoria so long as fusion can carry the load. It will be a tropia when it cannot.

Thus I have made the claim that exophoria and extropia are due always to lack or relative lack of convergence. Exophoria is negative convergence—actual or relative.

I would call your attention to the fact that there can exist, logically, no power of divergence, or of sursumvergence. That nothing but diplopia could follow such a primary act. Divergence would have no physiologic value. Therefore when the eye of a subject diverges either under cover or in the open it is due to relaxation on the positive side. It is not a primary divergence act. Certain of the exotropias are atavisms. No development of con-

vergence. No fusion. The arc which influences this segment of the automatic system is from the ciliary muscle back to the coordinating centers thence to the convergence. It may over act as in H or under act as in M. It may be relaxed by atropin—or by such a drug as adelin, on the automatic centers, as I have observed. It may be stimulated by pilocarpin types. But the early training of this reflex system is the most fundamental factor in prevention.

How about the practical application of these observations to the case in hand?

As the first step we must dismiss from our minds all thought of the primary influence of the will over the phorias and tropias. This is the first step. Muscle balance is dependent upon the reflex automatic functions first and upon the dominance of pull secondly—the latter depending upon abnormal elements of insertions of tendon and all that.

Our second step is to determine what is a normal balance. I have gone into this elsewhere and shall not take your time. My conclusion is that an exophoria of 2 degrees may be fairly considered normal in adults. That under puberty it runs slightly to the Es side. That this is not in harmony with others I am aware; but it is my finding.

The change is normal balance which takes place after puberty is parallel with other changes in the automatic nervous mechanism.

Another interesting thing happens later in life i. e. toward fifty years of age and beyond; and then we have to look carefully to the near balance. With the progressive loss of accommodative power comes a disturbance of the correlated convergence and we may find confusion for a time. Perhaps an Eso.—perhaps an exophoria for near. New habits must be formed over this mechanism.

This is a strong point for the early and gradual correction of presbyopia as against the delayed and the big jump method. Early correction furnishes a training of the changed relations.

I believe the profession has come to accept as exophoria of 3 or 4 degrees for near as normal, but with advancing years and the application of lenses for presbyopia comes an increasing exophoria for near due to lack of ciliary arc stimulus. This may attain a pathologic degree, an increase by the Walton test—which is the one I now employ—up to 8 or 10 or even 15 degrees is not unusual.

We often have complaints by these patients of discomfort with their near lenses and are apt to find this exophoria for near. Its relief

is not easy since the stronger the near correction the less the stimulus to convergence and the greater the exophoria, and incidentally the discomfort.

The third step is to realize that imbalance is not due to a muscle but to a coordinated group of muscles. Convergence is a positive function. On the convergence side are three muscles all supplied by the same nerve. Convergence is never due to the action of the internus alone. It is impossible to conceive of any ocular movement being brought about by a single muscle. Maddox has given us the best table for creation of the binocular eye. It is based upon the coordinated groups, the creation and the directing of the binocular eye.

The fourth step is to realize that the symptoms of ocular imbalance—the phorias especially—are influenced by fatigue elements. I believe it was in 1895 that we presented a paper on “asthenopia as a fatigue neurosis” and compared it to “writers cramp” and other fatigue neuroses. Like them it is divisible into spastic and neuralgic types. The evidence offered is that it is the central coordination which fatigues and not the muscle since the latter may be used for other acts and other rotations without distress.

Another point is that prisms wrongly placed or exercises wrongly done will often relieve distress temporarily. This is due to the rest afforded the coordination by the change. Therefore the bodily state as to endurance, autointoxication, hygiene, ventilation and all such measures, have direct influence upon ocular comfort in imbalance; but especially the amount of use, i. e. the abuse of the eyes, for fine work.

The next step is to realize why prisms relieve, and why the relief is but temporary; never leading to cure—only to palliation. I have discussed this in detail in previous papers and I have already taken too much time.

CONCLUSIONS.

The non-operative way to correct heterophoria and heterotropia (and it will help just in proportion to how early it is begun) is over the ciliary arc reflex loupe upon which we have been dwelling so much. That is to say, in the eso types we may reduce the ciliary stimulus to convergence by plus lenses giving full correction of distance error. Then, if needed, the adding of plus lenses for near as suggested by Linn Emerson or by creating continuous artificial myopia by the constant wear of over correction with plus lenses for near and far as I have advocated.

The way to increase the convergence side, is by the positive stimulus afforded by minus lenses, loading the accommodation, creating artificial hyperopia, sending in afferent impulses to stimulate the coordination. Prisms will do none of this because they are not acting on this reflex arc.

The operative way to correct, failing in the non-operative, is over the dominant muscles of the groups, and the muscles of election in my practice are the internus and the externus for lateral deviations. One should be governed by tropometric measurements in this. The superior rectus is elected for correction of tilting and for hyperphorias.

There is not time for details on this, nor for the application of the anatomic elements.

We have endeavored to deal with principles; and principles, well understood, make therapy a matter of detail.

We cannot go far wrong if we are right in fundamentals.

I apologize for not being more concise.

There is much to be said and much work to be done. We must take all view points. We must study all of the elements. Be like the spider in our attack and go on all of our legs! We can't go far on one.

DEFERENTIAL DIAGNOSES IN ANORECTAL DISEASE.*

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The medical profession is distressingly unfamiliar with proctology, and there might be some hesitancy about saying so were it not so freely and candidly admitted. However, the charge is made only as an argument or plea for better examinations and more considerate treatment.

Why is it necessary for a patient to be treated a year or more for piles, with salves or suppositories—because he has rectal hemorrhages? Should it be necessary for a man to be treated for piles with salves and suppositories, simply because he itches? When a patient has sharp excruciating anal pain—must he necessarily have piles? Perhaps the fellow that bled had a polyp or fissure, or cancer; was it reasonable to treat him for piles? If a patient has a fistula or pruititis and wouldn't it be unreasonable to treat him with salves for a year, telling him that he *probably* had piles. Is it reasonable to

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treat a patient for anything at all *without an examination*? The point that the writer is attempting to make undoubtedly is clear—that without examination *gross error is made by the physician*, and *tremendous* injustice done to those who have *reposed confidence* in him. With even unskilled examination—at least fifty per cent. less error would result, and with a reasonably skilled examination—that is, one made by a physician who has read proctology with mild interest—twenty-five per cent more errors will be eliminated. The remaining twenty-five per cent. will then have been recognized as requiring more expert consideration.

In past years little interest was taken from the teaching or clinical standpoint in proctology and all so-called rectal trouble was distasteful and called piles, either “itching,” or just piles—they could be improved, but rarely cured. *Operation was not advised* because “they might bleed to death,” or “die of poisoning.”

It is believed that the fear of cancer—and the development of local anaesthesia has done much to promote the study and science of entero-proctology. Within the last few years—special treaties on proctology have been written—x-ray and fleuroscopic assistance made available better methods of examination, and more comprehensive methods of diagnosis have been devised. The breadth and scope of this field having been recognized by the American Medical Association, in designating a special section (dealing with the entire gastro-intestinal tract) called, “Gastro-Enterology and Proctology.” Mention is made of the more recent development and recognition of this branch of surgery and medicine—that the value of more thorough examinations may be appreciated.

It has seemed desirable to more clearly portray the differential points of diagnosis in ano-rectal disease, to present the patient and his symptoms as condensed case records, omitting unessential detail; the examination is outlined and the differential points of diagnosis are noted and discussed as they have risen in each examination. Reference is made to the suggested treatment with no attempt to describe the technic of operation. Owing to the number of differing pathologic conditions existant in ano-rectal disease—some of the more common conditions only, are presented as case records—mention being made of common symptoms, and the possibilities of error in diagnosis.

Case F., a married woman of thirty-one, complains of pain and bleeding, covering a period of about four weeks, being particularly severe during and immediately following defecation. She

had been constipated for years, requiring an almost daily cathartic. In the **examination** she was placed in the lateral Sims position, exposure being made by retraction with a hand on each buttox. **Inspection** disclosed the skin around the anus and between the nates to be normal. There was a history of mild itching only when the pain was absent; since normal skin was adjacent to the anus, **puritis ani** can be excluded; on very careful inspection of not only the skin, but exposed anal mucous membrane, there were no openings or suspicious healed spots that suggested the external opening of a fistula—suspicion of the presence of fistula was not warranted by the symptoms, though its presence is always a possibility. The history of fistula should include the mention of an earlier abscess with healing and subsequent opening. By asking the patient to “bear down” or strain, as if at stool, a further exposure of the anal canal is obtained assisting by retraction with the fingers. In this case a small tag of inflamed tissue is discovered at the anal margin in the anterior commissure—a “sentinel pile,” and beyond this pile is an infected area or **anal ulcer**—commonly called **fissure**. Further investigation at this time, such as digital examination was postponed, until local anaesthesia was instituted, owing to its extreme painfulness in the presence of fissure. Subsequently, a small polyp was discovered above the fissure.

Operation under local anaesthesia is indicated, and may be done as an office routine. The **prognosis** is good for immediate relief of pain, and recovery in a few days. Anal ulcer is most often found in the posterior anal commissure.

Case I. A. presents a man fifty-two years old, who walked into the office in a very painstaking manner, sitting down carefully on the edge of a chair. His complaint was of pain in the rectum and back, which had grown progressively worse for four days; he described an even greater distress when his bowels moved. His history was negative for previous rectal trouble, and other than gonorrhea six years previously which had persisted for eight months, he gave no venereal history. There had been no recent bladder trouble until this attack, since which there was difficulty in starting urination. He stated that he had consulted three doctors—one of whom prescribed **ointment** to be applied inside the anus—the other, hot sitz baths, and the third, after making a digital examination, referred him to the writer. **Examination** of the anal region disclosed no abnormality; there was a suspicion of ano-rectal abscess, but no tenderness nor induration was found; there were no hemorrhoids. A prostatic involvement was possible. His temperature registered—100.6—pulse 100. Digital examination with the patient in lateral Sims' position—disclosed a normal prostate with no tenderness; there was a rounded smooth swelling posteriorly just inside the rectum—the anus and anal canal being normal. The **diagnosis** was an intra-mural abscess of the posterior rectal wall.

The indication was for local anaesthesia or gas and oxygen, with the opening of the abscess from inside the rectum, through the rectal wall, finishing with a partial incision of the sphincter and drainage. This accomplished a recovery in

about ten days. Three days were spent in the hospital.

Case P. A. introduces a business man forty-seven years old. He complains of itching and moisture around the anus, with irritation well up toward the scrotum. There is a history of syphilis, with treatment continuing at this time. The urinalyses was negative for sugar and albumin; diabetes is frequently accompanied by pruritis—improving with diet and local treatment.

Examination discloses a thickened parchment—like peri-anal skin, with involvement of the anal mucous membrane in its exposed areas; there are abrasions indicating scratching, and secondary infection; the quite usual **moisture indicative of irritation and inflammation** was present. There was no evidence of hemorrhoids either visually or by the extrusion method. Extrusion is the turning out or exposing of internal hemorrhoids, with one finger in the anal canal retracting, while the other hand retracts the opposing buttox, the patient being asked to bear down or strain, at the same time. Digital examination was negative for findings, other than two enlarged and elongated papilla. Inspection of the anal canal with the anoscope and hooked probe, discloses three rather deep pockets involving the crypts of Morgagni. The removal of these pockets is essential to a final **recovery in pruritis ani**, with which we are dealing. The crypts are involved with the pockets and papillae in an inflammation termed, "cryptitis", which is believed to be the major part of the pathology, producing the moist perianal region with the subsequent secondary infection, termed **pruritis ani**.

The **surgical treatment** is to remove the anal pathology—and to break the vicious circle of "the more they itch, the more they scratch, and the more they scratch, the more they itch;" this is accomplished by undercutting the peri-anal skin by a modified Balls operation—which immediately stops the itching.

Dwight Murray of Syracuse, New York, reports remarkable results in curing pruritis ani with autogenous vaccine, prepared from cultures of the bacillus fecalis.

Case C. R. presents an attorney, sixty-eight years old, weighing about one hundred and forty pounds; the first impression is good, since he is well groomed, but his skin is notable for lack of color—the man evidences illness. He complains of "piles and hemorrhages," having suffered more or less for eight or ten years. During the last two months, there had been increased hemorrhage—more pain and increasing constipation, with periodical diarrhoea. There has been some moisture and itching at the anus. Urinalyses showed a trace of albumin, and no casts—sugar was absent. Blood pressure 60—and 110—Haemoglobin 76%. (Further physical examination negative). Inspection of anal region disclosed hemorrhoids which were of the chronic external-internal variety; at the muco-cutaneous margin, a small spot was discovered which admitted a soft wire probe for about an inch and one-half. Introducing the finger into the anal canal, the end of the probe was felt beneath the mucous membrane, and with a little manipulation, emerg-

ed through the internal opening, completely threading the fistula. This type of fistula is often overlooked, much to the continued discomfort of the patients, because it is small. It occasionally follows a fissure or hemorrhoid operation, due to bridging over of an opened tract, though this is easily avoided by careful after treatment.

The internal hemorrhoids were found to be abraded, which might account for the bleeding. **At this stage of the examination, grave injustice may be done to the patient as well as bringing discredit to the examiner; the examination is not completed.** On introducing the lubricated finger thru the anal canal into the rectum, a growth is felt, involving nearly two-thirds of the circumference; the anterior or prostatic region is not involved. The palpation of this mass was painful, and only by **insistence** could its mobility and extent be determined. **This man has carcinoma (cancer)** it being necessary to differentiate it locally, from fecal impaction by its consistency—and from an abscess by its roughened and uneven surface with a tendency to bleed. Multiple papilloma might offer a possible confusion, as well as stricture of the rectum, including that type of soft granular infiltration found in a small percentage of specific cases. The history in these granular cases is of much value in making a diagnosis and it is often necessary to resort to a pathological examination.

Treatment was conservative; the man was underweight, anaemic with some kidney involvement, and a low blood pressure. The hemorrhoids and fistula were operated upon and a left mid-rectus **colostomy done**. Radium treatment has been continued with a palliative effect, and for over two years he has been fairly comfortable, and able to attend to his business most of the time.

This cancer case illustrates the importance of always making a digital examination; the presence of the more evident pathology does not warrant the overlooking of the more obscure.

Case C. presented himself for treatment, stating there was a large growth around the anus. This boy was eighteen, and said he had had a "sore" start at the anal edge about four months previously. **Examination** disclosed a very extensive cauliflower mass having a pronounced discharge, and a very bad odor. Having once seen such a condition, one would rarely err in diagnosing another case; the boy had condyloma—probably precipitated in this case by an untreated primary chancre at the anus. The treatment was surgical followed by anti-specific treatment. This condition is not specific in itself, but in a number of cases seen by the writer, all have shown a positive Wasserman.

A condyloma is similar to venereal warts, but when located at the anus is much more disagreeable, and the word "smell" is too mild to describe the odor.

Case A. T. H., a doctor, age thirty-six, complained of increasing soreness and pain. He

stated that he had had hemorrhoids for several years, but that they had rarely bothered him. **Examination** disclosed one large external hemorrhoid on the left lateral quadrant, and two externo-internal adjoining it. The large pile was very tender on palpation, and inspection gave evidence of clots of blood, showing as blue spots throughout the area. The diagnosis was a sub-acute multiple thrombotic hemorrhoid. Differentiate this from the more acute, which presents itself as a smooth rounded tumor, developing with increasing tenderness and having a decided reddish blue color; this last is the more common type. The peri-anal abscess, that is found involving the skin and mucous membrane at the anal border, evidences more inflammation—no blueness and less swelling. The treatment in the sub-acute hemorrhoid is radical excision, (enucleation) and in the more acute, incision and emptying out the clot. This is an office procedure under local anaesthesia.

Case S. presents a man of thirty-four, weighing about 120 pounds, standing 5 feet, 11 inches tall. He complains of extreme soreness in the rectum, and much discharge. Constipation is marked, necessitating daily cathartics. He gives a history of fistula, and four unsuccessful operations at a Grand Rapids Institution where they guarantee "a cure." **Examination** of the urine is negative—Blood Wasserman was negative—Haemoglobin 70%—emaciation—anaemia. Inspection disclosed a relaxed anus with marked discharge of pus. There was a large scar involving the sphincter at one side. Two hemorrhoids were in evidence. Digital examination of the anal canal disclosed two ulcerated areas deep into the anal sphincter, with only the skin preventing drainage to the outside. Further inside, about two inches, there was a linear stricture just admitting the end of the index finger. This stricture accounted for the continued ulceration in the anal canal. The indication is for a posterior proctotomy, that is, cutting the stricture similarly to an internal urethrotomy: removal of the hemorrhoids and opening the ulcerated areas out through the remaining sphincter and skin for drainage. This was done with great relief of the pain and distress, but with an anticipated slow recovery, owing to the marked infection. Such cases always warrant a further study of the intestinal tract to eliminate tuberculosis and cancer.

May it be suggested that prolapse of the first degree or mucous prolapse is often accompanied by internal prolapsing hemorrhoids—which in themselves are often the cause of the turning out of the mucous membrane. The *differential diagnosis* should be made by the history, color and regularity of contour in prolapse, as opposed to irregularity of contour, and the marked pain of hemorrhoids.

A presenting polyp may be confused with hemorrhoids—but digital examination should discover its identity; a polyp may bleed when injured at its pedicle, and thus cause confusion.

It is wished to state that the common garden variety of "itching piles" is either fissure,

fistula, pruritis ani, or some modification of one of them.

Much remains to be considered, but the writer finds that he is carried more deeply into the discussion of ano-rectal disease than was intended when selecting the subject, and in his attempt at brevity, it is feared that the discussion, perhaps has suffered, as well as the audience.

THE ROENTGEN DIAGNOSIS OF JOINT CONDITIONS.

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Owing to the similarity of the signs and symptoms of many joint diseases, it is often a very different matter to make a diagnosis in these conditions by clinical methods alone, and it is here that the x-ray is often a great help in solving the problem. There is a tendency to call almost everything rheumatism or infectious arthritis owing to the great prevalence of these two and in most cases it is correct, but it is the occasional variation from this which is important to pick up.

Much of the confusion in differentiating joint diseases is due to the fact that in many of them the cause is unknown, and therefore our classifications are all faulty. In many cases a germ can be isolated, but in many this is impossible.

In a joint we have two conditions to deal with—the synovial membrane and the cartilaginous surfaces, and these enter into every joint. In children we have an additional factor—the epiphyseal line. In children the diseases seen are different in most cases from those seen in adults.

Scurvy is very frequently seen in children but rarely in adults. In adults the x-ray findings are rather insignificant as compared with those in children. In children all the changes are on the diaphyseal side of the epiphyseal line. Just behind the epiphyseal line we get what looks like a second epiphyseal line. The portion between these two is of much increased density. We get no change in the joint proper. Marked periostitis is also frequently seen, and often a large sub-periosteal hemorrhage is seen which may cover the entire shaft of the bone and may become calcified and dense.

Rickets is also seen frequently among infants and may occur in utero. All the disturbance takes place at the epiphyseal line. There is an absorption and softening of bone, so that the ends of the bones have a tendency to be saucer shaped and flare out. There is also a marked

absorption of calcium salts with an extreme grade of atrophy, and in this condition fractures are very common, as many as a dozen may be seen. We often get a cupping out of the ends of the ribs known as the "Rachitic Rosary." Periostitis is uncommon.

Syphilis—In children we see fluid and thickening of the periarticular tissues. The most important thing, however, is an erosive process on the diaphyseal side of the epiphyseal line, and never on the epiphyseal side. Irregular eaten out areas are seen. Periostitis is very commonly seen, but hemorrhages under it are seldom seen. Syphilis is a great bone producer and therefore periostitis is frequently seen.

Coming back to the question of the classification of joint diseases in adults, it is seen there are objections to all classifications but that of Goldwaite seems to be the most satisfactory. It is in brief as follows:

1. Acute Polyarticular rheumatism.
2. Chronic Arthritis.
 - A. Infectious (acute).
 1. Tuberculosis.
 2. Gonorrhea.
 3. Syphilis.
 4. Typhoid.
 5. Pneumococcic, etc.
 6. Unknown.
 - B. Atrophic.
 - C. Hypertrophic.

By the term chronic in this case we mean diseases that give permanent and lasting pathological changes and acute vice versa.

Acute Polyarticular Rheumatism—In this the x-ray findings are negative, except for fluid and periarticular swelling. There are no bone or cartilage changes. No bone change ever takes place here unless the cartilage is involved. The findings in this case are the same as those after injury.

Infectious Arthritis—We see infectious arthritis in three stages of development, although in several of the stages it is very difficult to make a differential diagnosis by the plate alone. In the first stage, it is similar to acute polyarticular rheumatism, fluid in the joint, and periarticular swelling. No bone destruction or atrophy. Second stage—after about three weeks it has reached its maximum intensity and begins to subside. The swelling disappears and the fluid is absorbed. We see atrophy both of the soft tissues and of the bones. Destruction of cartilage is shown by narrowing of the joint and by approximation of the joint surfaces. Third stage—here the disease is gone and re-

pair is taking place. The atrophy is gone as well as the swelling and the patient is able to use the joint. This is the stage where we see spur formation replacing the destroyed cartilage, and we may get complete ankylosis if the cartilage has been destroyed from the entire joint surface.

Tuberculosis—In the following out of the above classification we now come to those diseases which are the result of an infection by a known organism. In tuberculosis of the joints we get a hazy indistinct picture as if it were a poor plate which possibly, however, can be eliminated by the sharp cut appearances of the bones at some distance from the joint. The synovial membrane becomes very much swollen causing the haziness. The cartilage becomes eroded causing the bones to be approximated, and the bones themselves often show eaten out eroded areas. Fluid and periarticular swelling are seen also in the active stage. Atrophy is also a prominent sign. There is very little new bone formation unless due to a secondary infection through sinus formation. The ankylosis present is usually due to a fibrous union and not a bony one.

This is seen most often in the hip, the knee, the elbow, the wrist, the ankle and the shoulder. In the spine it is much more frequent in the middle stage of childhood, but may occur at any age. The characteristic point here is an angulation of the spine antero-posteriorly due to a narrowing of the anterior portion of the vertebra affected. The portion affected is always anterior and never posterior.

Gonorrhea—This attacks most frequently the knee, ankle or wrist although other joints may be attacked. In the earlier stages the signs of an acute infection are seen and later after the acute symptoms have subsided there is considerable new bone formation with ankylosis. In the knee joint it is very prone to attack the under surface of the patella and often causes an ankylosis between this and the femur.

Syphilis—Syphilis causes an acute joint condition and indirectly a neuropathic disease known as charcot joint. In the acute form you have periarticular swelling and fluid in the joint as in any other acute infection, but it does not destroy the cartilage, so that when the acute process subsides we have a normal joint remaining. However, as an additional point of differential diagnosis from acute polyarticular rheumatism, we have usually a periosteal reaction of the bone where the cartilage of the joint ceases and the periosteum begins. Fluid and swelling and periosteal thickening at the

junction of the cartilage and periosteum should always cause one to suspect syphilis.

Charcot is not infectious but neuropathic and gives a picture practically the same as that of syringomyelia. It is characterized by extreme destruction of the joint surfaces. Large pieces which look like sequestra are broken off and lie free in a large swollen joint containing more or less fluid. As it is not painful the patient continues to use the joint, consequently there is no atrophy of the bone, but rather the opposite—an eburnation. This is one of the diagnostic points in this condition. The joints affected in the order of their frequency are knee, ankle, spine, hip and shoulder. This condition is usually seen in the course of Locomotor ataxia. It commonly follows a slight injury and is characterized by an acute painless enlargement of the joint.

Typhoid and pneumococcic arthritis give the same picture as an ordinary infection and therefore cannot be differentiated. They are both marked bone producers.

An interesting condition seen very infrequently is a haemophylia joint. You see destruction of the cartilage and a haziness as in tuberculosis. In the joint cavity you see a blood clot which has usually undergone calcareous or fibrous change. When typical it is practically pathognomonic of the disease.

We frequently in the routine examination of elderly people see arthritic spurs around the joint which are not causing any symptoms whatever, but which a slight injury will often light up from its quiescence and produce a very painful condition. We then see a big inflamed, swollen painful joint with arthritic spurs around it, and often in it, but no sign of injury.

Atrophic—We now come to the second big type under chronic arthritis—namely, atrophic arthritis. The changes seen in this are very similar to those seen in the second stage of infectious arthritis as described above. It is usually seen in middle aged persons. There is a marked atrophy of both the soft tissues and bones. The limbs show deformities—the legs often being flexed. There is no redness, or swelling. No evidence of fluid. There is marked limitation of motion which is due to fibrous changes as there is no new bone production. You get absorption of cartilage and some destruction, but no attempt at repair by new bone formation. Many clinicians think that this is a stage of infectious arthritis and not a distinct clinical entity.

Hypertrophic Arthritis—Hypertrophic arthritis is a disease found in people of middle and

old age being most pronounced in those of fifty years and older.

Clinically it is characterized by no swelling, no pain except on motion, which may cause a limitation of motion because of the pain. Roentgenologically no atrophy of the bones, not even that which is incidental to old age. No soft tissue swelling. There is marked new bone formation—there being numerous exostoses and much lipping at the edges of the articulating surfaces. One other characteristic change which, however, is not always present is joint mice—small calcified loose bodies in the joint. There is rarely a true bony ankylosis. The mushroom shaped head often seen in the hip is suggestive of hypertrophic arthritis.

This condition stimulates the third stage of infectious arthritis described above, but is apparently a definite clinical entity. In the spine it differs from other places in that we may get an ankylosis in the condition known as “poker back.”

General Considerations—A malignant condition never crosses a joint from one bone to another by direct extension. When two joint surfaces are involved, we are dealing with an inflammatory condition and not a malignant new growth. It may, however, occur in both bones by metastasis.

Tuberculosis hits the shoulder rather infrequently, and when it does it is usually of a dry type with no fluid or swelling.

In Perthe's disease which is a non-tuberculous infection, you get flattening of the head of the femur, and an irregularity of the epiphyseal line, but no erosion of the bone itself.

In charcot the edges are clean cut because of the eburnation, while in osteomyelitis the edges are hazy and fuzzy.

Tuberculosis of the spine rarely shows a skipped infection—that is two diseased portions with a normal portion between.

Outside of charcot joint disease, syphilis does not destroy cartilage.

The diagnosis of all bone and joint conditions is very difficult in most cases after operative procedures.

Conclusions.—In discussing such a broad subject as this in a short paper of this kind, only the main points can be brought out. However, a clean cut text book picture is not always seen, and the different stages of the various lesions described vary considerably. It is therefore highly important in many cases to know something of the history and clinical findings in order to make a differential diagnosis. The amount of involvement is, however, demon-

strable in all cases, and this gives the clinician very valuable information regarding therapy. We feel that from the serious consequences following most joint diseases when wrongly diagnosed and treated, that every joint condition of any severity should be submitted to the x-ray and that there should be a conference following this between the Roentgenologist and the clinician as only by these means can the best results be obtained.

ABDOMINAL CAESAREAN SECTION.

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During the past six years I have performed fifty-four Abdominal Caesarean Sections.

(a) *Twenty-one* were performed on women whose pelvic measurements were too small for normal delivery.

(b) *Eleven* were occipital posterior positions in which the head would not turn. Eight of these were left posterior and three right. In one of these the woman had been fifty hours in labor.

In a number of cases the membranes had ruptured. Choice lay between High forceps and Version. Consultation being had in each case we favored Section.

(c) *Seven* were for Central Placenta Previa.

(d) *Six* were for Eclamptic Convulsions

(e) In four cases the mothers were normal but the babies abnormal. Two of the babies had very large heads. Another was a monstrosity which I did not diagnose before delivery. It had a complete cleft palate with a head like a pig. The hands and feet also were very much like the cloven hoofs of a pig. It lived six months. The fourth abnormal baby was very large; the mother carried the baby as nearly as I could make out 300 days. The baby was a male, perfect in every way and weighed at birth 14 pounds.

(f) One was an impacted Frank breech with threatened rupture of the uterus.

(g) I also did a Section for inter-locked twins. The one presenting was *transverse* the other *perpendicular*. I also feared rupture of the uterus in this case. A mid-wife had been trying to deliver this patient and had made a number of vaginal examinations. An abscess developed in the left broad ligament about two weeks after operation. I drained this through the abdomen. In three weeks mother and twins went home in good condition.

(h) Four cases, each possessing unique features I would like to report in detail.

Case 1. A young woman was referred to me in June, 1914. On examination I found a large opening from the vagina into the bladder through which I could place my three fingers. The patient was emaciated and morose. She gave a history of having been in labor the preceeding March. A physician had delivered her by forceps of a dead baby. In a few days urine had begun to drip from the vagina. This condition continued until the time I saw her. I sewed up the rent in the bladder with silver wire using Kelly's method. A second similar operation was necessary to completely close the fistula. She made a good recovery and came to me pregnant in 1916. Her measurements were normal, the baby was normal in size, but I feared a breaking of the old scar in the vaginal wall. I did a section with good results. The mother and child are alive and well.

Case 2. Two years after delivering the woman with inter-locked twins I was called again. She was in the same house, in the same room and the same mid-wife was in charge. The patient was apparently dead—no pulse was perceptible. The mid-wife explained that the patient had been in labor for 24 hours and to help her she had dilated the cervix. In doing this she had ripped up into the body of the uterus, ruptured the old scar and allowed the child to escape into the abdominal cavity. I hurried her to the hospital and with all speed performed a Porro operation and put in drainage. She made a rapid recovery.

Case 3. Farmer's wife near Wayne, Michigan, was referred to me in her seventh month. Her measurements were normal, but she had a large umbilical hernia, also a badly lacerated perineum from previous hard labors. She came to the hospital at time in labor. We waited 30 hours until she was becoming exhausted. She apparently had no expulsive force and although an anterior—the head would not come down—I made an incision through the umbilical hernia sac down to the uterus and removed the child through the opening. In closing the abdominal wall I did the Mayo fascia over-lapping operation for the umbilical hernia. The complete operation took 45 minutes. The patient suffered from ileus for a few days but made a good recovery. Mother and child went home in two weeks. One year later I repaired the old torn cervix and perineum. Patient is now doing her own work on the farm.

Case 4. A young woman had had section done on account of small pelvis. At the end of two weeks she was about to return home when a rise in her temperature was noted. She complained of pain over McBurney's point. Soon she began to vomit and within 24 hours a mass could be felt in the region of the appendix. An incision was made over the mass and an appendiceal abscess drained. Patient slowly recovered but was no longer able to nurse her baby.

On seven women I have done this operation a second time and on one I have operated three times. Of these I sterilized three. In every one of these eight old cases I found post-operative adhesions. In one case where the old in-

cision had been made above the umbilicus a band as thick as my two fingers stretched from the abdominal incision to the fundus uteri. With any of the various high incisions adhesions are almost inevitable. To avoid this condition Kronig and Doederlein, both recently dead, perfected a new operation, which I will describe. A Pfannenteil incision is made just above the hair line through skin, fat and fascia down to the recti muscles. The flap so formed is dissected upward off the muscles for a distance of $4\frac{1}{2}$ to 5 inches and the apex of the flap fixed by suture to the skin. The recti muscles are then divided in the median line for the whole length of their exposure, bringing the operation down to the parietal peritoneum. The bladder, which has been emptied, can be seen below. The peritoneum is incised in the usual way, carrying the operation down to the space between the bladder and the uterus. Here there is a thick wrinkled fold of peritoneum. This fold is cut by a curved incision in the opposite direction to the original Pfannenteil incision. This flap of peritoneum is easily turned down toward the bladder, exposing the membranous part of the uterus with the underlying child. The uterus is opened by a longitudinal incision and the baby is quickly removed. There may be some little difficulty in delivering the head but if the assistant pushes on the fundus of the uterus, the head will pop out. If it is a breech it is delivered so much easier. Now the placenta is delivered with the hand and the uterus is not at all delivered. Neither the bowels nor the omentum is seen. The incision in the uterus is closed with No. 2 chromic, interrupted suture being used, and the thick fold of peritoneum replaced and sewed with No. 1 plain catgut continuous suture. The abdominal wall and parietal peritoneum are closed in the usual manner.

I have done seven sections in this way and much prefer it for the following reasons.

1. It is less shock to the patient.
2. The operation is away from bowels and omentum.
3. There is less bleeding because in this segment of the uterus there are not the large sinuses.
4. The incision in the uterus can be covered with a thick layer of peritoneum lessening infection from the inside.
5. Pressure from above antifixes the uterus protecting the incision from adhesion.
6. The incision is low down away from the danger zone of the peritoneum.

The only disadvantage is that the operation

takes longer. I have been able to perform the high operation in 22 minutes. Doing the new operation takes me from 30 to 35 minutes. Patients make a beautiful recovery after this operation and are free from the distension that frequently follows the older methods. One of the cases I operated on in this way had been in labor one week, being examined frequently by attending physician. The urine showed albumin and colon bacilli. There was also a pus discharge from the rectum. I would have hesitated to do high operation, in fact, I think if I had the patient would have died. I did the new operation, the patient had infection and was sick a long time but recovered and has a fine baby.

In my series of 54 cases, I have lost 3 mothers all due to eclampsia. Two had had many convulsions and were in a dying condition when operated upon. The third was an elderly primipari. She developed convulsions after the operation and died in 48 hours. These were all referred cases in which I was called hurriedly to operate. I have never had to do section on one of my own cases for eclamptic convulsions because I have always been able to prevent the occurrence of convulsions.

In the above cases of eclampsia the babies all lived.

In the 54 sections I delivered 55 babies, two of which were dead. One of these was outside the ruptured uterus already described. The other baby showed some signs of life but could not be revived. One mother died three weeks after an abdominal section but a post-mortem showed that other pathological conditions were the cause of death and not the operation.

COMMUNITY HOSPITALS—ARTICLE 3. RULES AND REGULATIONS.

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FLINT, MICH.

After all, the results we get in the community hospital, will depend more upon the manner of its running than the form of its organization.

The spirit of its rules, their standard and the thoroughness with which they are carried out will determine exactly what the results will be. The institution must function at all times so as to properly care for the patients, win the confidence of the community and secure the support of the physicians. The degree with which it succeeds in doing these things will measure the degree with which it

fulfills its purpose as a community hospital.

If these objects are obtained all individuals working in the place must understand the underlying principles and must be actuated by the spirit they presuppose. For the reason that the regulation of the work is of so much importance, it will be gone into rather specifically and suggestions given as to how the medical board can serve its purpose under the conditions laid down. The scheme may be altered in many ways, possibly with advantage, but the underlying principles should not be disregarded in so doing.

LABORATORY FACILITIES.

To render the patients good service at the present time requires adequate and accessible laboratory facilities. The physician, when he deems it of not much importance, now frequently hesitates to ask for some special laboratory examination because of the added cost to the patient. Yet it is often just the thing which would have guided him to the proper diagnosis in the case. As the scheme for the control of the physician's work will use the laboratory a great deal as a check, it would seem essential that the hospital should have adequate laboratory facilities and that all examinations should be free to its patients. Unless this is provided, the cost of such examinations will be offered as an excuse for their omission. Then the first general rule is that,

1. Free laboratory examinations by competent technicians must be furnished to the hospital patients.

STAFF MEETINGS.

To keep up the interest in the hospital efforts, to iron out misunderstandings, to provide a means of the staff expressing itself and to imbue all with the spirit of the institution, regular staff meetings must be held, say every month, when the functioning of the hospital is open to discussion, reports of common interest are given and when a review of the preceeding month's work is made with the results carefully compiled from the records. This will let in light where it is needed and the consciousness of the monthly summary will be at all times a great corrective of undue haste and unfounded self confidence. So a second general rule is that,

2. Regular staff meetings, with proper presentation of the hospital work, must be held.

RECORDS.

The value of a case record is so evident it need not be discussed. The fact that good work

cannot be done without them should be just as evident. The use that a record system can be in controlling the quality of services given is not so well understood or at least not freely utilized. It is this use of a record system which will be particularly dealt with here. A third rule is that,

3. A proper record system must be installed.

The medical board can well give a great deal of attention to the installation of a suitable record system. In the devising of forms it should be remembered that not all physicians have had a sufficient training in record work to make them concise, thorough and good judges of relevancy. Any aid by titles, sub-titles, etc., which can be used and not encumber the blanks, are advisable. The general history blank, recommended by the Pennsylvania Bureau of Medical Education, with its lists of the subjects of inquiry a history should cover is very suggestive in this regard.

FILING OF RECORDS.

The record filing system of the hospital should be under the supervision of a physician who is not in competitive practice, either a special registrar or the head interne.

He should see that the records are gathered together and complete before filing and that they are properly indexed so as to be available. He also should make up the summaries of the hospital work for the staff reviews at its meetings.

TO WHOM ARE RECORDS OPEN

The records are of course confidential in nature and properly open to the patient and his physician only. But it would seem as though for the patient's interest a little more leeway is necessary.

Access to the records could be safely given to those who are in immediate charge of them, upon an order of the court, upon an order of the patient, upon request of the attending physician, upon request of another succeeding attending physician, upon request of an attending physician at a patient's re-entry into the hospital, upon the request of the superintendent, upon the approval of the medical board to physicians who are making a study of cases for scientific purposes with suitable restrictions by the board and upon request of the directors or medical board in case of differences with a physician whose records are needed for proper information.

WHAT RECORDS ARE TO BE MADE.

All patients should have a history of the usual kind, records of the various examinations made,

of the hospital stay, operations done, etc.

Who takes the history is not of so much importance as that the attending physician signs it to show he is familiar with it and assumes responsibility for it.

The various observations and examinations noted should be signed by those responsible for them.

All orders should be in writing and on the chart, becoming a part of the record.

All materials removed at operations should be taken in charge by the surgical supervisor and with suitable data, go to the pathologist. The results of his examinations are filed with the record. The specimens may be saved for the physicians if so desired. The reasons for this are obvious and while it may require rather a simple procedure such as an inspection of gallstones, it can only be effective if no exceptions are made. It will curb the removal of unoffending organs and reveal the products of conception as well as complete a diagnosis, but more than that it will quiet the gossip which grows out of a lack of such authoritative reports.

In addition to these records which are commonly used, certain others have been suggested for checking up which are not common.

These are in the form of cards filed with the superintendent after a patient has been in long enough for a complete examination or before operations.

These should be required of every case excepting accidents going directly to the dressing room and those patients dying too soon after entering to have the required data obtained.

It is suggested these should be filed in the superintendent's office within say four days after the entry or before operations.

All operations should be scheduled in the superintendent's office and authority for them given from this office. These cards should be made out in duplicate, one by the attending physician and one by the nurse in charge of the floor where the patient is. The object of the card is to secure thoroughness and carefulness in the conduct of his case and to be practicable they must be brief and simple. While the same blanks are used by the nurse and the physician, the nurse for the most part can indicate by a plus or a minus sign that the required records are made out. The blanks should be of various forms to cover the different fields with the special data needed for each.

The list of cards could include the head, chest, abdomen, pelvis, central nervous system, extremities, obstetrical, genito urinary and **pediatric**.

Every chest card should in all cases show whether a record of the following points has been made, it may be merely indicated by "yes" or "no", or the data itself, if brief enough, should be given: history, physical findings, general condition, temperature, pulse, respiration, sputum, urine, x-ray, blood examinations (Whites, Reds, Hemaglobin and Widal), aspiration findings, diagnosis, operations proposed.

The card for abdominal cases should include in its data, blood examinations, cell counts, Widal and Wasserman tests; a record of the eye, abdominal, patellar and cremasteric reflexes.

The pelvic card should show whether the patient is suspected to be pregnant, has flowing, pains or fever and if curetted, why.

The card of the urinary tract should show that the x-ray, cystoscopy, explorations with instruments, functional tests, blood urea estimations and examinations of the urine for bacilli have not been overlooked.

In emergency cases of course the record would be proportionately brief. The card of a ruptured tubal pregnancy or a perforated pyloric ulcer could be very brief and still satisfactory. The urgent symptoms alone would suffice.

A little reflection will show how such a system would lessen the mistakes which we know do occur now. It is a constant reminder that it is "better to be safe than sorry."

The mere putting down on paper your thoughts make you arrange and classify them; you are more careful and more exact, therefore more clear and accurate in what you have in mind. It naturally leads to conservatism.

When you are reminded on such a card of the usual pitfalls in diagnosis, you can avoid them and as you go on record in the case you try to keep that record clean. No one would overlook tabes in making out such a card yet an uncomfortable proportion of tabetics are operated on erroneously because of their peculiar abdominal pains.

STANDARDIZATION OF METHODS.

How far such a hospital can go in the standardization of its methods is a question. In all efforts at standardization only that should be required which is commonly accepted. A Widal test or a blood culture can be asked in all suspected typhoid cases or obscure fevers, but to require all typhoid patients to live on an exclusively milk diet or to be "tubbed" is to invite trouble. As nearly all treatment is still more or less debatable, few routine treatments can be outlined and made obligatory. But a

variety of diets, enemata, operative preparations post operative cares can be listed and these would no doubt be generally used. Physicians who do not like them, can order them with variations or substitute others. The hospital can in this way develop certain routine methods which will meet with general favor as many hospitals do now.

While such routine methods sometimes discourage individuality, they simplify the training of nurses, make easy the giving of orders, lessen misunderstandings as to the care of patients and offer good tangible material to those who may be a little uncertain at times and in need of such aids.

The system here outlined assures the patient a careful consideration of his trouble and proper treatment and warns the physician of his failings as well as keeping him up to date on methods of investigations.

The whole scheme is one in which the hospital lives up to the obligations to the community of being a good hospital and tries to win the confidence of the public for the institution, rather than for any group of physicians.

The physician is given the opportunity of doing any kind of work that he cares to excepting that which is careless, ignorant or dishonest. He is given the facilities and incentive to develop high grade services without a dictatorship by competitive men. He can specialize or do general practice as he chooses but he will be at all times cautious.

AN EXPERIENCE OF 18 MONTHS ASSOCIATION AND CLOSE OBSERVATION
IN THE NEGROES MENTAL,
PHYSICAL, AND MORAL ACTIVITIES, AS COMPARED
TO THAT OF WHITE
RACES.

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Appreciating the fact that the mentality of the colored race is on the whole below that of the white, the problem of camp sanitation has been in my opinion a rather more difficult one to contend with.

I take the liberty of making the above statement in view of the fact that my associations prior to service in the A. E. F., and for a period of over one year has been constantly with colored troops.

I also invite the attention of the reader that it has been my good fortune to observe various classes of white troops during my period of service and establish a standard. There is an old saying, "you never know a person unless you live with them." I have lived with and amongst them, both white and colored, therefore speak from experience. What are their peculiarities and how are they to be treated?

To begin with let us take up the mode of living of the negroes originating in the Southern parts of the United States, at the same time where it is warmest. Let us compare them to the white race in the same parts of the states, and see how they differ mentally, morally and physically. For the information of the reader, I might mention that the negroes discussed here are gathered from the following states: The greater majority come from the State of Texas, while the remaining are gathered from Arkansas, Louisiana, and Virginia, all having been mobilized at Camp Travis, San Antonio, Texas.

Returning to the days of slavery, and even to the present period, the negro has been regarded as more or less inferior to the whites at all times. Their associations have been practically at all times ignored, their privileges limited consequently bringing about different and poorer environments than those of the white races. Especially are the environments of the Southern negro far more difficult than that of the Northern negro.

I being a resident of the North, have observed both the Northern negro as well as the Southern negro. As a rule the Southern negro has been found to be illiterate, very few being at all possessed with enough intelligence to write their own name. While at the same time the negro of the north is in many instances a student, as also seeks other lines of employment as does the negro of the south.

In this discussion let us begin with the home conditions and environments, such as exist in the homes of these men and what their results. From what I have gathered of the southern negro, their homes are about alike throughout the south, in that they are small, insufficient, poorly furnished and inhabited by large families, for the negro multiplies rapidly, raises large families and has many roomers, thus resulting to marked congestion of living quarters. Realizing that they are susceptible to disease, especially so towards tuberculosis, congestion and close contact should be considered as one of the important factors in the dissemination of this disease within their family as

well as to others of their race. The problem of sanitation and hygiene amongst the negro has been a very difficult one to solve, although great progress has been made in nearly all of our larger cities in the United States to eradicate the so-called White Plague, however, there yet remains considerable to be accomplished along this campaign.

Their mentality being below par, we must realize their lack of normal intellect, thus being accountable for their results. The theory of heredity can also be applied to the predominance of tuberculosis in this race, in view of their mode of living and surroundings. Thus in reality resulting in their lowered resistance to ward off disease, at the same time in consideration of these facts, the average negro when taken sick has not sufficient presence of mind to consult a physician, but lingers along until his ailment has made good progress, in many instances being fatal.

Home sanitation and hygiene is unknown to the greater majority, ventilation of homes is a rarity, and considered harmful, especially so during the colder seasons, owing to fear of draught resulting in contracting colds, body cleanliness is a matter of difficulty due to the lack of bathing facilities, with ignorance in the importance of same resulting in the lack of personal hygiene due to the absence of initiative ability, thus the frequency of vermin infections, especially of the body louse.

Scabies is also a frequency with the negro, for he fails to realize the severity and the laxity of consulting a physician resulting in rapid and wide dissemination of this highly contagious parasitic skin infection to others, and in many instances the starting of an epidemic.

One of the most important problems is venereal disease, and its frequency in the negro. The most common conditions encountered are gonorrhea and chancroids, the latter one being the most frequently predominating, and is in the majority of instances due to negligence of personal cleanliness and sexual hygiene. Here again can be considered lack of intelligence. He is so neglectful that failing to realize the importance of medical attention, he permits the condition to take hold properly thereby causing extensive damage. Gonorrhea is extremely common due to the same attitude of mind in that same is not a disease requiring no treatment, but speaks of it as female trouble, and continues to journey along with his discharge until it has subsided to return at a future time after it has become chronic. Here again, lack of mental development plays its

part. Fortunately for the negro, and the future of their race, the present war and draft played an active part in the discovery of venereal disease in the negro.

It is interesting to learn, and here to mention that during the draft in the month of November, 1917, I assisted in over 6000 physical examinations, and in nearly every case there was observed venereal disease, either gonorrhea, chancroid, or syphilis. Most of the cases were the first two mentioned, while the remaining was the third, either in the primary or secondary stages. The reader will be interested to know that the writer has discovered cases of plastic iritis, in the negro due to syphilis, since being in the A. E. F. (evidently overlooked in the U. S. A.), the diagnosis having been assisted by a history of the patient a Wasserman reaction of single or double plus, and reaction of the condition to treatment for syphilis.

Had it not been for the patient's complaint of visual disturbances in one or both eyes, the discovery of syphilis would have never occurred, however, their eye involvement had been there prior to their being drafted into service.

They are, however, willing to undergo any form of treatment for a cure when a thorough explanation is offered. The average Southern negro cannot be reasoned with, but on the other hand must be told to do a thing without explanation. As a matter of fact, explanations are in reality unnecessary for he is incapable of absorption and co-ordinating facts, due to lack of mental development and intelligence.

He is in the majority of instances regressive, being incapable of holding a good position or detailed to take charge of men. He soon falls down on the job, as is commonly stated, and necessitates changing his duties. Where again we note the absence of initiative ability, as the result of mental deficiency.

The negro fears colds, therefore has no conception of the importance of fresh air, never ventilates his tent, barracks, or home, unless he is ordered to do so. He knows no moderation, knows not the importance of body cleanliness, neatness, is extremely careless, limited tolerance, and is inactive.

His co-ordination of thought and reasoning ability is weak, his moral is in most instances along the line of persuasion, may be wicked, untruthful and profane.

Although his physical development may appear perfect, he lacks co-ordination of muscle force. Were he to realize his muscular force he could accomplish the same amount of labor with less exertion.

The fact of living in congested homes with the fear of proper ventilation and out door life is accountable for the frequency of respiratory diseases and tuberculosis resulting in a high death rate. Fortunately our system of social service and house to house investigation has improved their struggles to a lesser degree, and in many instances has educated them for their own protection. In the American E. F., the death rate amongst the colored troops has been very high during the epidemic of influenza, broncho-pneumonia complicating practically every case, resulting in many fatalities.

The frequency and predisposition of the negro to respiratory disease can be accounted for by the fact that originating from a warm climate he fears the cold weather, therefore attempts to hug the stove so that when he steps out into cold air contracts respiratory ailments. He eventually becomes a habitual complainer, seldom knowing limitation. In most instances his ills are minor and superficial, requiring no treatment other than suggestion.

Malingering is less frequent with the negro than it is with the white race, for when once the doctor learns to handle the negro, and understands the limitation of his mental intelligence, he finds no difficulty in treating his ills. The negro is a lover of sympathy, and when spoken to with tranquillity he is contented, forgets his trouble, and goes on about his duties. On the whole the negro is very superstitious in view of this suggestion is of great importance. Better results are in most instances obtained with kindness, treat a negro harsh, continue to ride him, as is said, he becomes wicked. He fears no punishment, and in view of this is difficult to manage. However he being possessed of a religious mind, fears God. He is constantly heard to sing, pray and preach religion to his fellow men, adhering to the same subject. He is more or less indifferent, is predisposed to hallucinations and delusions. His insight to life on the whole is poor and limited, failing to see beyond his present status and surroundings.

He is very emotional; therefore a religious maniac in many instances, resulting in a class of negroes known as the Holy Rollers or Holy Jumpers. Having a poor memory is consequently forgetful, thus necessitating frequent repetition of routine. Has no will, no self dependence, cannot rule or control desires. As they lack the control of personality, are deficient in thinking, feeling and acting power. (1) (Kraepelin) It is of a common occurrence for a negro to complain of a peculiar feel-

ing in his head. In a small detachment of colored men, one momentarily developed a violent mania with a peculiar hallucination. His desire was to run shouting that someone was after him with a knife, taking eight husky negroes to manage him until it was possible to tie him down properly for transportation to a hospital. He was later brought before a special board of medical officers and found insane. Suggestions to the negro are much value, and infrequently will settle his mind.

(2) "Greisenger" (prior to 1850) describes a circular psychosis such as is frequently observed in the negro.

(3 & 4) "Palret" was the first to describe circular insanity as a typical combination of mania and melancholia, while "Baillargers" was the first to emphasize the close connections between maniac and depressive psychosis, as expressed in his nomenclature "folie a double form."

The psychosis is periodic and can be observed in a large number. The maniac type predominates in most instances. He is loud yells, shouts, and sings, whenever possible, especially so during periods of relaxation, at times they develop a criminal attitude, and a most nonsensical dispute will lead to violence amongst themselves, thus resulting to some form of injury in one another at times of a serious nature. Their implements as a rule are sharp instruments, such as knives and razors, producing bodily harm, and sometimes death. This is a stage of violent mania. The periods of melancholia are characterized by silence, and when questioned will fail, or refuse to answer or offer a reason for their silence or depression. The reaction of the average negro's mind is very sluggish. Many are worried about themselves without any reason. They develop habit form ideas, such as will bring them daily to the infirmary for treatment. Suggestions will in many instances, relieve them of their anxiety.

The importance of repeating to them facts is beyond estimation, for they are most observant to that which pertains to their own individual self. They will develop routine habits, and are quite sincere in living up to such, as for example (the attention of the teeth), clean their teeth after every meal, and in many instances when unnecessary. Few will be very careful about body cleanliness, bathing frequently, while the majority must be forced to bathe. They have no conception of the importance of bathing, and the cleanliness of the skin. They are as a rule, willing and attentive to advice, but

unfortunately have not the mental intelligence to comprehend the importance.

Whether this is due to negligence or mental insufficiency, is difficult to decide. However, in my opinion, the latter is the underlying factor in general. Their criminal attitude is momentarily never considered as grave, for in most cases after a quarrel, the men will defend each other by stating that they were only fooling, while in reality, they were in earnest. In one case when two had fought against each other with razors, one having been severely slashed, and when questioned, made the following remark "We were only fooling and accidentally fell on the razor," this may sound ridiculous, however such is of frequent occurrence.

They are seen to associate together shortly after their quarrel, for apparently there remains no permanent enmity amongst their own race. Their general attitude of mind is that of pessimism, and only optimistic with their religious mind where the latter predominates.

Of the total number of colored men under my observation, I have found that only two per cent can read and write with a limited amount of intelligence, while of the remaining ninety-eight per cent. most of them write their names with difficulty, while others are unable to even accomplish that. This latter statement was verified during the act of signing the payroll, and observations made. To overcome their ignorance, they request the man in charge of the signing to do so for them, while they signify by a mark.

I have also observed that the negro of the medical corps of the army is possessed of a higher intellect and intelligence, in that of those under my personal observation, eighty per cent. read and write with much intelligence, while the remaining twenty percent are limited to name only. Evidently the men of the Medical Corps are assigned in accordance to their qualifications, in view of the fact that it requires one with sufficient intelligence to advise and treat the sick.

TABLE OF THE AVERAGE NEGRO'S INTELLIGENCE.

Those who can read and write with limited intelligence2%

Those remaining of whom most write name only98%

AS COMPARED TO THOSE IN THE MEDICAL CORPS.

Read and write well80%

Those remaining write name only and read with limitation20%

To conclude, I am pleased to add I have personally enjoyed service amongst the negro,

their direct associations and in their environments was the only means affording a study and observation of their mentality and intellect, and their ability for matters general as compared to the white race. The results obtained are in my estimation satisfactory.

It is needless to say that this war was of invaluable importance in the step it took to educate and elevate the life of the negro race. The requirements of the army in so far as sanitation and hygiene are concerned, has taught the negro what is meant by cleanliness and the correct mode of living. Not only has the army benefited the negro along the lines mentioned, but it has educated every one in the United States for the training in matters of sanitation and hygiene will automatically reach the home of every man and woman who has served in the United States Army, regardless of what capacity, during this war, whether it be Army, Marine, A. R. C., Y. M. C. A., Nurse Corps, etc.

SUMMARY.

1. That the average negro is inefficient in mental development, resulting in their lack of intelligence and neglect.

2. That the negro is not a difficult subject to manage if properly studied and observed, for realizing that he is predisposed to be pessimistic, suggestions at whenever possible are of great value in obtaining results.

3. Sanitation, hygiene and personal cleanliness can be established with the negro when approached to him in the proper manner, making facts impressive and simplified by explanation.

4. Compulsory or obligatory schooling is of most necessity for the colored race. It is my belief that every negro family should be investigated as to how they rank in school education as compared with the white race. Not only this, but it is the duty of every citizen of the United States to possess a knowledge of the English language.

5. That the negro is subject to disease, especially so to tuberculosis, more readily than the white, is due to their mode of environment, congestion and denial of modern home facilities; hereditary habits play an important role. To improve this race can only be accomplished by a canvass of their homes and environments.

6. Finally this war and conscription has been of invaluable benefit to the colored race in that it has without doubt improved his mode of living by continual training and force of observing rules and regulations. The army life has raised the standard of their intelligence

to an unmeasurable degree that not alone will improve them, but they will no doubt impart the importance of their teachings to their families. The army life has made them to be better citizens, taught them the necessity of sanitation and hygiene, has impressed them with what is meant by body and sexual cleanliness, and prevention of disease and lastly, the importance of a school education.

This war has enabled the Government of the United States to make a thorough study and observation of their great melting pot to bring home to every citizen the knowledge and value of the prevention of disease, by their teachings of sanitation and hygiene and to make the people of the United States a better and stronger nation, mentally, morally and physically.

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X-RAY EXAMINATION IN RELATION TO THE GENERAL CASE RECORD.*

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I have been asked to talk upon the interpretation of x-ray plates of the viscera, especially the lungs, stomach and bowels. I will endeavor to restrict my remarks to these subjects. Books have been written upon them. Never mind. I will leave the details largely to the books and give you in the fifteen minutes at my disposal some of my personal opinions regarding the diagnostic requirements as illustrated by the roentgenology of pulmonary tuberculosis, peptic ulcer and gastric carcinoma.

In clinical medicine tuberculosis holds such a preponderance over other chronic pulmonary diseases that if the lungs are found affected in any respect the diagnosis by common assent remains tuberculosis until proven otherwise. In x-ray work this clinical practice has profoundly influenced the interpretation of plate and screen. Before the influenza made its appearance, this method of labeling chronic lung affections would prove correct in at least 19 out of 20

cases. The error involved is doubtless a widely fluctuating one. The increased skill in the physical examination has introduced another factor of error. The clinical diagnosis of incipient tuberculosis is not infrequently made in the absence of cough or sputum. Such cases are referred to the roentgenologist for confirmation. Under these circumstances the roentgenological opinion may vary so greatly that the clinician may finally regard it as worthless.

The reasons are these: The white race is a tubercularized race. Our experience corroborates the estimate that 90% of adults show pulmonary signs of former tuberculosis on the x-ray plate. The roentgenologist therefore can find tubercular deposits in the lungs of about 90% of patients. The problem is not the detection of tuberculosis changes in the lung tissue, but the discrimination between old quiescent lesions and fresh active lesions, or between old quiescent lesions and the same type of lesions which are undergoing recrudescence. Moreover pulmonary tuberculosis does not conform to one pathological type. We may be dealing with a bronchial type, a lymphatic type, or a parenchymatous type. Also the distribution of the infection produces a farther variation in the mode of development. Thus the hilus, the apical, the lower lobe and the pleuritic effusion cases confront us.

How irrational then is it to look for some one distinctive pathognomonic sign on an x-ray plate! It is apparent that the true diagnostic requirement necessitates a study of the case—a case history, symptomatology, physical and laboratory findings; the mode of infection and development, the pulse and temperature records. Then and then only can the x-ray plates be interpreted with discrimination and judgment. But when all this is done we find that in a large proportion of early cases the x-ray interpretation is still indecisive regarding activity.

This is not a fault but a limitation of the x-ray method. The x-ray plate is a record and an exquisite analysis of densities. It will show an infiltration too slight for the most delicate percussion; it will reveal an involvement of both lungs so symmetrical as to deceive or leave uncertain the most practiced examiner; it will show bronchial or lymphatic lines of thickening or beading utterly beyond the refinements of present day physical diagnosis; it need never miss consolidation, abscess, cavity, infarct or tumor; it leaves no doubt concerning pleuritic exudate or pus whether or not the exploring needle has been employed; it encounters no difficulties regarding pneumothorax whether post

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operative or by bronchial communication. Mediastinal involvement, adherent pericardium, diaphragmatic adhesions and in fact every thoracic consequence of tuberculosis whether common or rare which causes changes in density of tissue can be studied in satisfactory detail. It gives incomparably the most precise, the most minute and the most extensive information of any single clinical method. But it cannot replace the microscope in the pathological diagnosis of tissue changes, it cannot substitute the bacteriological diagnosis of the microbic cause of a disease and it must not be used to exclude the clinical study of the activity of a disease process.

As unreasonable expectations are swept aside the x-ray becomes increasingly helpful. We may then see indications rather than proof of activity in the thickening of certain trunk lines, in the beading, in the soft parenchymatous blurring, in the nebulous envelop of calcified foci and in the presence of pleuritic exudate. Serial plates at reasonable intervals may sometimes be possible for comparison whereby a progression of lesions may be demonstrated. New signs may develop. We are now collaborating with Dr. Shepard on a sign of the specificity of pulmonary lesions by the reaction in the lung tissue following tuberculin injections. The old sign of specificity is the calcification of a focus. The tubercle bacillus is a special inciter of calcium deposits. We may recognize signs of old quiescent lesions in the calcification of hilus glands and lymph nodes in the lung fields and in the thickened remains of an old pleuritic effusion. But an acute non-tuberculous inflammation may be superimposed upon old inactive tuberculous remains, renewed activity may be concealed in the hilous deposits, and a clear straw colored exudate may result from a mediastinal growth that may look not unlike hilus tuberculosis. Calcification in lung tissue may result from the inclusion of any dead tissue or substance such as the remains of abscess, hemorrhages, exudate or foreign substances inhaled, including metallic or mineral dust. Pneumokoniosis may stimulate it. Also a disturbance of the calcium metabolism of the body as in a carcinoma or syphilis of the bones may result in pulmonary calcic deposits. The dictum is thus enforced:—The x-ray findings belong to the clinical history and the diagnosis should be reasoned from a correlation of the data.

Gastro-Intestinal Tract. The x-ray examination of the alimentary tract forms the most brilliant chapter in the history of contemporary

medicine. Unlike the lungs, this tract was not by nature ready for the eye of the roentgenologist. It required a filling or coating with some substance visible on the x-ray screen and plate. The first suggestion of the use of bismuth for this purpose came from an American, Dr. Hemmeter, and the first study of the stomach in an animal by the x-ray, using this substance, was by Cannon of Boston. Close upon this memorable exploit Williams of Boston assisted by Cannon first examined human patients by the bismuth method. After a lapse of five years Reider of Berlin began using the same method and forgetting Williams and Cannon, Germany was given credit for discovering the use of bismuth in the examination of the gastrointestinal tract.

After it was handed back to us from a foreign source American roentgenologists took up the study with an enthusiasm which has never waned. At the present time, however, barium sulphate has replaced bismuth salts as the most inert, abundant and inexpensive substitute for x-ray purposes. With either bismuth or barium it became possible to study by the x-ray what is in fact a mobile cast of the inside of the stomach and intestines. It is not the stomach or intestines itself but this barium cast which possesses x-ray visibility. The shape, size and position of the stomach, the most delicate peristalsis, any deformity of stomach outline due to a disease of the gastric-wall or to adhesions, scar-tissue, spasm or indentation of any tumor or organ outside of the stomach can be investigated with a directness beyond the wildest dream of the old masters of medicine to whom the transmutation of metals and the philosopher's stone seemed rational.

The palpation and manipulation of the abdominal contents by the hand beneath the fluorescent screen under x-ray illumination gives not only direct information unobtainable by any other method but also gives an extraordinary precision to the palpation and percussion of the abdomen in the regular clinical manner. The localization of points of pain or tenderness with reference to the viscus beneath is made as definite as it is possible to make a sign which is psychologically uncertain and yet which clinicians never cease to depend upon. A soreness over the appendix, the gall-bladder, the stomach or the duodenum may bring into question the reliability of the sensory testimony of the patient but not the reliability of x-ray localization.

The chief function of the barium method is

the detection of a peptic ulcer of stomach or duodenum and of cancer of the stomach. Gastric ulcer inhibits peristalsis to a large extent over the whole stomach and completely over the site of the lesion. On the side opposite the ulcer the stomach wall is likely to be drawn into a deep narrow contracture called an incisura due to the irritation of the transverse muscle fibres. At the site of the ulcer there may be a small protrusion, the nitchen sign. The coats of the stomach may be nearly or quite perforated but unless such a perforation is sudden and acute under pressure, the contents of the stomach do not escape but form a pocket along the stomach wall. This nichen, with or without the incisura and pocket, is close indeed to being an unequivocal sign of gastric ulcer. But peculiar forms may result from adhesions and cancer of the stomach may be accompanied by a malignant ulceration with an organic hour-glass also sometimes similar to the spasmodic incisura. The incisura may frequently be present without either ulcer or cancer.

This brings us again to the real burden of this paper which is to insist that a diagnosis requires a correlation of the x-ray evidence with the clinical and laboratory findings. A single illustration will point the moral without adornment. We may select a case with a palpable tumor and with symptoms and laboratory findings suggestive of cancer of the stomach. By the x-ray we find a constant filling defect in the gastric contour which by palpation coincides with the tumor. Can we diagnose such a case as cancer of the stomach? It is fair to assume that such a diagnosis would be correct in more than 19 out of 20 cases. But syphilis of the stomach can mimic every detail of cancer clinically and roentgenologically. A Wassermann reaction is of great value but this is not unequivocal. A patient may have a positive Wassermann and yet have cancer. Also a patient can have a negative Wassermann and yet have syphilis. The diagnosis thus remains often in the last analysis a matter of probabilities and of professional judgment.

One of the best points in the differentiation between syphilis and cancer of the stomach is to turn on the light and look at the patient. If he ought to have only a few months to live according to the x-ray signs and yet is fairly well according to appearance, syphilis is likely to be the correct diagnosis.

So important does this confusion of cancer and syphilis of the stomach appear to us, that in all cases diagnosticated as gastric carcinoma we advise antisiphilitic treatment in hopes that

a small per cent may be saved. But we would not advise a postponement of the surgical treatment on this account in any operable case, because the medical and surgical procedures are not incompatible.

The x-ray examination has reformed the clinical diagnosis of duodenal ulcer. The half-confessed inability of clinical authorities to distinguish gastric from duodenal ulcer is still seen in the heading of chapters Peptic Ulcer under which both gastric and duodenal ulcer are discussed. Gastric ulcer until a few years ago was supposed to be common and duodenal ulcer rare. The x-ray conclusions supported by operative findings, especially at the Mayo Clinics, showed duodenal ulcer to be the more common and to outnumber gastric ulcer ten to one. The duodenal ulcer demonstrated by the x-ray may be overlooked by the surgeon who is not experienced in this particular field.

The one most positive x-ray sign is a deformity of the duodenal bulb or first portion beyond the stomach, which is embryologically a part of the stomach. This is the site of the ulcer in at least 95% of cases. In these cases there is a peculiar deep, rapid bisecting gastric peristalsis with rapid initial emptying. This may result in complete emptying of the stomach in an hour more or less but more often there is a later pylorospasm with a six hour gastric residue. Carman considers the duodenal type of peristalsis with normal stomach contour, and without pyloric obstruction but with a six hour residue, characteristic of duodenal ulcer whether or not bulbar deformity is present. In our own work we consider a good ulcer history and gastric hyperacidity necessary for an unequivocal diagnosis of duodenal ulcer. Adhesions to the gall-bladder may cause deceiving and persistent deformities of the duodenal bulb and a reflex focus in an irritable appendix or gall-bladder a pylorospasm with a six hour gastric residue.

Pyloric obstruction is perhaps the most obvious condition within the gastro-intestinal field. The obstruction type of peristalsis is almost pathognomonic. Antiperistalsis when observed is a valuable sign of pyloric involvement. But the size of the stomach, the half-moon 24 hour residue and the final peristaltic quiescence of exhaustion completes the x-ray picture. The cause of the obstruction is more likely to be ulcer than cancer. Carcinoma excepting in the late stages, is associated with a gaping pylorus and very rapid emptying, irrespective of the location of the cancer. If the cancer is at the pylorus, the orifice is likely

nevertheless to be widely open and stiffened so that closure is impossible. Later of course the growth may obstruct. The examination of the gastric juice is of great value in differentiating between ulcer and cancer in these cases. The practical conclusion however is likely to be operability rather than any diagnostic differentiation.

Pneumoperitoneum although bringing about a realization of the popular ideal of the x-ray examination of abdominal organs has not contributed to the determination of ulcer or cancer of stomach duodenum.

The multiplication of examples would enforce the interdependence of the clinical and x-ray findings. Beware of the pathognomonic sign. It is rare, elusive, often brilliant, more often deceptive. Beware also of probabilities in the disguise of facts. Guess-work however shrewd and with however large a percentage of accuracy is not the ideal of medical diagnosis.

CASE REPORT:

PERFORATED GASTRIC ULCER. DISCUSSION.

FRED'K C. WARNSHUIS, M.D., F.A.C.S.,

URSUS V. PORTMAN, M.D.,

GRAND RAPIDS, MICH.

HISTORY.

E. M.—Age, 28. Married. Occupation, Truckman.

(1) *Complaint*—Pain in abdomen.

(2) *Family History*—Negative. Father, mother, brothers and sisters living and well.

(3) *Past Illness*—Has had diseases of childhood measles and whooping cough, but no other illness except present illness. (Note below).

(4) *Personal History*—

(a) *Head and Neck*—Negative for history of diseases.

(b) *Chest*—Lungs, no illness relative lungs. Heart, no illness relative heart.

(c) *Abdomen, Stomach*—Appetite always good; does not eat rapidly or overeat because it causes too much gas. Thirst not excessive. Indigestion—has had stomach trouble for four years, and for two years has eaten mostly eggs and milk and no meat because meat makes more gas on his stomach. Belches considerable. No heart burn; sour stomach only when he vomits, then vomitus is sour; never nauseated; vomits very often immediately after meals, desire comes quickly, without pain and vomiting is easily done;

not projectile in type; never saw any blood in vomitus, only undigested food; does not vomit with change of position. Has never taken any medicine for relief of indigestion, but simply has changed his diet. No pain after eating. Never has had pain in the abdomen; has only gassy, full feeling which usually comes immediately after eating. Has never noticed any tenderness of abdomen. Has never awakened at night with pain or vomiting.

Intestines—Not constipated; does not take a cathartic oftener than once in two months. Never had diarrhea or hemorrhoids. Never saw bloody, clay colored, or tarry stools.

(5) *Extremities*—Negative for diseases.

(6) *Genito-Urinary*—Urination normal; no pain, frequency, blood or nocturia. Venereal diseases and sores and discharges denied. Wife has had no miscarriages. No children, married two years.

(7) *Mental Disorders*—None.

(9) *Operations*—Was operated four years ago for hernia with undescended testicle, at which time his appendix was removed.

(10) *Present Illness*—Began yesterday just before stopping work, with cramp-like pains over abdomen. Pains were not localized but general. He thinks more severe low down. The pain was transient but hard enough so that he had to stop work and sit down and double up. He did not feel nauseated or vomit or notice particular tenderness. He went home, ate his supper as usual, (eggs and milk), and took castor oil. This morning did not feel well so stayed at home. He had a gassy feeling, no pain, no nausea, no vomiting. Ate his breakfast, had one small bowel movement, urinated as usual. Ate lunch of milk and eggs, had no distress but felt full, thinks he had more gas than usual. Was up and dressed, when suddenly, about 4:30 o'clock this afternoon, was taken with intense pain in abdomen near the umbilicus; it was so severe that he broke into cold sweat and doubled up, lying down. The pain was not referred but stayed in abdomen near umbilicus and was constant, not cramplike as yesterday, was not nauseated or did not vomit. His wife called our office and at five o'clock he is seen and examination made. Pain is almost gone now.

PHYSICAL EXAMINATION.

(1) Made at 5 o'clock p. m., April 17, 1920. Dorsal position, lying dressed on a couch. Well nourished, slender, pale but not in pain. Weight 148. Height 5 ft. 6½ in., tem. 98. Pulse 74.

(2) *Head and Neck*—Negative for disease.

(3) *Chest*—Breathing is entirely costal. No difficulty. Rate 22. No dullness, fremitus, breath sounds vesicular.

Heart—No disease. Rate 74. Blood pressure on palpation not high. Arteries elastic.

(4) *Abdomen*—Is flat. No abdominal respir-

ation, no peristalsis or tumors seen. On palpation the muscles are tense; tenderness general over entire abdomen but most marked over caecum and McBurney's point. Liver, gall bladder and spleen not felt. There is no dullness or tympany on percussion, but percussion over caecum gives considerable pain. Changes in position make no difference in general examination. There is an operative scar at outer border of lower end of right rectus. Rectal examination not made.

(5) Genito-urinary—Negative.

(6) Extremities—Show no disease.

Diagnosis—Not made.

Recommended—Moist heat to abdomen, enema, absolute quiet, no medication.

Subsequent Care—

7:30 p. m. 2 hours later.

Drs. F. C. Warnshuis and U. V. Portman.

Patient lying in bed in dorsal position, says he feels better; is mentally alert, no pain but a full feeling. Respiration, costal, rate 22. Temp. 99.1. Pulse 82. Says there was a little result from enema. No flatus. Urinated without difficulty and no blood seen in stool or urine. Abdomen is now distended, general muscle rigidity, tenderness marked over caecum, on pressure over sigmoid pain is referred to caecum. Percussion over entire abdomen is tympanitic and causes pain over caecum.

*Recommendation—*Immediate operation. Patient acquiesces.

10:30 p. m. 5 hours later.

After delay due to ambulance, patient is examined on operating table. Has no pain but full feeling. Abdominal distension about the same. Pulse 88. Abdominal muscles tense but tenderness is now definite in right upper quadrant and epigastrium. Upper segment of right rectus is in contraction and tenderness most marked along rectus.

Pre-operative Diagnosis—

- (1) Gastric Ulcer, perforated with peritonitis.
- (2) Gall bladder, perforated with peritonitis.
- (3) Obstruction.

Operation—

- (1) Began 11 p. m. Ended 11:45 p. m.
- (2) Anaesthesia—Ether.
- (3) Incision—Right rectus, above umbilicus from costal margin to umbilicus. Muscle split. Very free bleeding on incision. Peritoneum was found slightly thickened. On opening yellow serous fluid seen. Omentum markedly congested and lymphatics seen as fine white threads covering omentum and mesentery. Stomach found at once. Was congested, not distended. On palpation a tumor the size of a lemon found on less

curvature, pre-pyloric. On inspection a red tumor covered by one fourth inch of plastic lymph with a hole which admitted the end of a curved hemostat was found. The condition was a perforation of a pre-pyloric ulcer. The ulcer surface was very friable and bled very easily. Ulcer perforation was closed with a purse string and an overlapping of catgut, without disturbing the plastic lymph. Gastroenterostomy, posterior, done in the usual way. Mucosa red and oedematous. Size of stoma, about two and one-half inches. Linen sutures in peritoneum and catgut for musculosa and mucosa. Gall bladder inspected and found normal. A soft rubber drain placed in the lesser peritoneal cavity and near ulcer area. Closure made in the usual way. It was noted on closing that the peritoneum had increased in thickness and friability since beginning of operation.

(4) *Post-operative Diagnosis—*Gastric ulcer, pre-pyloric, lesser curved, perforated into lesser peritoneal cavity.

(5) *Progress—*Patient was discharged from hospital two weeks after operation. Recovery smooth with no untoward complications. Drain removed fourth day.

DISCUSSION.

This case is of special interest to us, coming so soon after our recent discussion at the last Society meeting. Also it was somewhat atypical in history and in physical findings.

Bearing in mind our history and findings we had to consider several conditions:

(1) Appendicitis could not be entirely excluded, although there was a history of removal of the appendix by a reputable surgeon, because the incision was in a peculiar place, where the appendix was seemingly out of reach and symptoms and findings were indicative. We thought the patient might have been mistaken about the removal of his appendix.

(2) Kidney disease was excluded because of lack of kidney history, typical pains, or urinary symptoms or signs.

(3) Mesenteric thrombosis was considered but cases of this condition seen, have had a history of recent injury or a definite focal infection, besides a clear record as far as abdominal conditions are concerned. The pain comes on suddenly, is intense with circulatory disturbance, shown quickly by rapid pulse.

(4) Gall bladder disease was seriously considered. We thought of rupture of a gall bladder. There was no history of previous typhoid or other general infectious disease, no jaundice, pain or tenderness, but with indefinite stomach story, the gall bladder had to be considered.

(5) Obstruction—Was a serious consideration and might be from a torsion of omentum, or strangulation from adhesions or intussusception, but the man's bowels had moved in the morning after his dose of oil; there was no tumor and onset was a sudden acute condition.

(6) Pancreatitis acute—Could not be excluded, but is comparatively rare and seldom diagnosed except at operation.

(7) Stomach—The most probable condition was an acute stomach of some nature. There was a definite history of stomach trouble but the absence of a real ulcer history which one expects was confusing.

Gastric ulcer statistics are confusing and of doubtful value because of difficulties of differential diagnosis. These ulcers cause death in about one-half of one per cent. of all cases. They occur at all ages but almost half are seen between the ages of twenty and thirty. Statistics as to percentage of ulcers that perforate are extremely variable. The extremes being from 1.1% to 18%. Thirty-five per cent. occur on the lesser curvature. Twenty-eight per cent occur on the posterior wall and fourteen per cent occur at the pylorus. Other sites average about five per cent.

General peritonitis is the usual sequel of perforation and its extent naturally depends upon the chronicity of the condition. If adhesions and omentum have had time to wall off the acute ulcer, the resultant soiling of the peritoneum after perforation is less. The extension of peritonitis may occur in all directions and involve any or all abdominal viscera.

The symptoms and signs of perforation are characteristic only early before the condition is masked by peritonitis. The history of course is of extreme value, but English cites eleven of fifty cases of perforation with no stomach history. Pain is the earliest symptoms and

occurs suddenly, usually extremely severe but several cases reported walked into the hospital. The length of time which the pain lasts is dependent upon the amount of stomach contents. If there is little in the stomach at the time of rupture, the pain may soon pass away. It is also dependent upon the size of perforation as the larger hole permits more contents to extravasate. The location of pain is as one would expect in the epigastrium. Collapse and prostration follow but not necessarily immediately and depends upon the amount of hemorrhage and extravasation into the peritoneal cavity. Vomiting is frequent and dependent upon the amount of material in the stomach and the size of the perforation. The pulse is usually accelerated especially in the severe attack but may be slowed later until peritonitis has developed, when it will take the usual rise with developing fever. The abdomen at first, flat and tense, becomes distended later with inflammation. Tenderness of the epigastrium or hypochondrium is constant and spreads.

In five cases of perforation, I have seen these so-called characteristic signs and symptoms were present in all, but in this case reported there was a confusion of evidence. Of these five cases there was one death and this death due to delay in operation. Twenty-four hours had elapsed since rupture, and the man, aged 62, was a poor operative risk. Wm. Mayo, once stated that the mortality increases 10% for each hour of delay.

The operation of choice is, of course, excision of the ulcer and probable gastroenterostomy, with drainage. The treatment of the ulcer area depends upon circumstances. In this case reported it was impossible to excise the ulcer, therefore it was thoroughly enclosed and gastroenterostomy done. Recurrence of the ulcer and second perforation may occur. In duodenal ulcer, recurrence is frequent and necessitates partial gastrectomy and gastroenterostomy in every case of perforation recurrence, but also because of the decrease in the size of the lumen of the duodenum when the ulcer is excised or enclosed.

The Journal

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June

Editorials

A. M. A. MEETING—NEW ORLEANS.

The New Orleans meeting of the A. M. A. resulted in an attendance of 3800 members, a splendid series of sectional meetings that were well attended, presenting papers that were of interest and excited discussion. The House of Delegates expedited its work of passing upon the many reports of the various Councils, standing committees, trustees and officers. Dr. Hubert Work, of Pueblo, Colo., was elected president and Dr. Isador Dwyer, of New Orleans vice-president. Dr. Alex R. Craig was re-elected secretary in recognition of his continued able and splendid services. Dr. Dwight L. Murray, former vice-speaker was elected speaker of the House of Delegates and Dr. F. C. Warnshuis vice-speaker.

In spite of a little wavering in the Reference Committee, the following resolution was reported out and unanimously adopted.

RESOLVED, that the American Medical Association declares its opposition to the institution of any plan embodying the system of compulsory insurance against illness, or any other

plan of compulsory insurance which provides for medical service to be rendered contributors or their dependents, provided, controlled or regulated by any State or the Federal Government.

The American Medical Association has thus made a definite expression of its attitude in regard to compulsory health insurance. The remaining activities will be imparted in our Delegates' Report to be rendered at our annual meeting in Kalamazoo and will be published in our July issue.

New Orleans was not an ideal place for this meeting on account of its limited hotel accommodations. The much advertised entertainment features and Petit Mardi Gras while comprehensive on paper was witnessed by only a third of those in attendance on account of limited space and standing room only at that for the few who attempted to be present. The quarters of section meetings were fairly adequate but in each room where the larger sections convened it was extremely difficult to hear a speaker.

We venture to suggest that it would be a welcome provision if the executive officers of the Association employed an efficient section meetings manager who would be charged with the duty of each year perfecting the details for providing suitable lanterns and curtains, sounding boards, chart racks, blackboards, rostra, etc., thus assuring a uniform arrangement from year to year and thereby adding to the attractions of section meetings. One man should be charged with this duty.

Michigan was well represented, a list of those who attended will be found under News Notes.

Boston was selected for the annual meeting place in 1921.

Our National Association is a wonderful, potent organization. Its plan of organization, the scope of its activities, its efficient executive officers, the influence it wields is a matter of pride for every member. Its Journal is the greatest medical publication in the world. No physician can afford to not receive it. In as much as our National Association is solely concerned in advancing the principles of public health, approved medical schools, medical education, elimination of patent and fake proprietary medicines, better hospitals, health legislation, the uplift of the science, theory and practice of medicine, surgery and their recognized specialties, the progressive welfare of all members of the profession—it becomes an obligation on the part of every doctor to become a Fellow of the American Medical Association.

By virtue of your membership in your county society you are a member of the A. M. A. But in addition you should become a Fellow. We will be glad to send you an application blank upon receipt of request. You should subscribe your allegiance and support to the A. M. A. by applying for Fellowship. Apply now.

HEALTH CENTERS—A REPLY.

Editor's Note:

In our last issue we printed an Editorial on "Does Grand Rapids Need a Health Center." This Editorial did not apply strictly to Grand Rapids; it was germane also to other localities. We are pleased to give space to the contribution below. Dr. Jones has well pointed out the profession's obligation and duty. Are we as physicians awake and do we realize the situation? May we not have further discussion from some more of our members. The question is one of vital concern to all.

Does Grand Rapids need a Health Center? Unless health conditions and social conditions are perfect in Grand Rapids, I'll say she does. There is no question as to the necessity, in Grand Rapids nor in any other community, the only question which arises is as to the organization, composition and control of such an institution. A Health Center is needed for the benefit of both the medical profession and the layman.

As society is at present constituted medicine must unfortunately be a business, though a business on a different basis than any other. It is a truism to say that medical service is a commodity the sale of which differs in every respect from that of other commodities, and trade in which must be subject to special laws. It is a commodity which must be obtained by practically every one at some time, and must be had at the time and in the quantity needed, regardless of other factors. There has been for years a gradually increasing sense of dissatisfaction with the present system of medical service, a dissatisfaction affecting the thoughtful physician to almost as great a degree as the patient. The general social turmoil of today has made this more than ever apparent; and one thing has made itself very evident, that there must be some change in the present system. There can be no question that a change is coming, we have only to consider what direction this change will take, and whether it will come from within the profession or from without.

Will physicians who as a class will feel this change most, and who are best in position to point the way, continue to disregard the signs until new ways are forced upon them by adverse legislation, or will they wake up and take an interest in their own destiny? We are everywhere threatened with a flood of legislation aimed at the improvement of medical practice. If not health insurance in some form, with the evils of contract practice, what is the next step? Will it be socialization of medicine through state control? One thing is evident, the public as a whole is not getting good medical service, in fact the great mass of people can no more afford good service than the physician can afford, under the present system, to give it. And it is equally evident that the interests of the profession are not to be conserved by its present attitude. Negation will get us no where. One local society after another goes on record against proposed changes, while what we need most is some constructive plan which we can put forth as an improvement upon these changes, some plan fair alike to patient and physician. If we do not produce such a plan, let us not think that any consideration for the profession will count against the good of the community.

One such constructive step has been the establishment of the Health Center, with its co-ordination of community medical, nursing and social service. No one of these things is new but the combination, as a community enterprise is, and it is through their combination that all are achieving a new success. It scarcely seems necessary to argue the advantages of combining these services. In the embryonic stage of the free or near-free clinic, the various and sundry hit-or-miss charity organizations, the privately financed pioneer community nurse, it was probably of advantage to have these different organizations, each specializing in some narrow field. The growth of the work necessitates, from the standpoint of economy alone, that these organizations be combined, or restricted in growth; otherwise the overhead will be out of all proportion to the results obtained. How far this coalition is to be pushed is hard to say, but, at least in cities of moderate size, all organizations working toward a better distribution of medical service, medical social service and nursing service should be under one head, since they are inter-dependent. In such an organization should center all public clinics, all public health nursing, medical social service, the medical work in the schools, a clinical laboratory, and educational work aimed at the prevention of disease.

Such an organization will be of great advantage to the physician in that it will provide the opportunity to care for many patients with the greatest economy of time, will furnish an abundance of clinical material for study and will automatically broaden his education through the forced association with different specialists. It should provide a good medical library, certain scientific instruments and opportunities for clinical instruction for the whole profession. It should offer instruction to the student nurse in public health, school and dispensary nursing, which are highly specialized fields of nursing. It will afford to a large number of people a type of medical service badly needed and not at present available in most places. There is no intention in this plan to supplant the private physician, but rather to supplement his work, more especially by making available the services of specialists to many, to whom such services have hitherto not been available. The work of the Health Center will also to a large extent cover a field almost untouched by the medical profession at present, that of disease prevention, examination and advice aimed at the prevention of disease rather than at the cure of disease already present.

To consolidate these various activities seems to me to necessitate that such an institution be under the control of the city department of health. Such a combination is a community affair and the expense should be borne by the community as a whole, which does not preclude the possibility of charging reasonable fees to those able to pay, nor compensating physicians who give part of their time to the undertaking. The argument that it would be a political weapon is not a valid excuse. The people of a community have at all times the power to control its politics and there is, as a general rule, no group in which party politics plays as great a part as in medical affairs under control of the medical profession. It would scarcely be advisable in my opinion to attempt to put over such an organization as is proposed for Grand Rapids at one stroke. Both public and physicians have to be educated up to it, but once let a start be made and its growth will take care of itself.

Lafon Jones, M. D. Flint, Mich.

IMPROVEMENT IN HOSPITAL SERVICE

Every state medical association in the United States has its part in the present universal movement for the betterment of hospital service. Every association now has its own com-

mittee which is studying the hospital situation in its state in co-operation with the Council on Medical Education of the American Medical Association. The Council has obtained, through reports, correspondence, and other methods, data relative to all hospitals in the country and each state committee has been supplied with the data relating to the institutions in its state. Through their closer familiarity with the hospitals, or by inspections the state committee is in excellent position to verify these data and to make a reliable report to their state association and to the Council.

For convenience and in order to secure uniformity of reports from the forty-eight committees regarding the relative efficiency of hospitals, blanks furnished by the Council call for a rating of all hospitals in classes A, B, and C, grouped also according to the special class of patients cared for. This rating is not for publication but will aid the Council in the preparation of a list of hospitals which are considered worthy of approval. These lists are subject to frequent revision so that names of other hospitals can be included as soon as sufficient improvements are made to warrant their being approved. State committees are urged to promptly report to the Council any instances where such improvements have been made.

The purpose of the work is to aid the hospitals in providing for their patients the best possible service and in no way to injure those which are honestly endeavoring to provide such service. Toward this end, every possible assistance will be given to individual hospitals by the Council or by the local committee in establishing such changes as will make them worthy of approval.

Forty-two state committees have reported progress in connection with the latest survey and thirty-four have turned in reports regarding hospitals inspected and graded, which have more than half the entire bed capacity of all general hospitals in the country. Meanwhile, this work of the Council is not conflicting with, or duplicating the splendid work being done by the American College of Surgeons, the Catholic Hospital Association, the American Hospital Association or other agencies. In fact the work of each is evidently complementing that of the others.

At the New Orleans meeting, recently, the House of Delegates of the American Medical Association registered an intense interest in the improvement of hospital service and authorized the trustees to generously provide for that work. This work has been so intimately related to that

of the Council on Medical Education that the name of this Council was changed to the "Council on Medical Education and Hospitals."

In brief, further enlargement of hospital work by the American Medical Association is assured and in this work each state is destined to have an important part. Toward this end each association is urged to make its hospital committee permanent and to retain on it those who will not only be active but who can also do the work in the most efficient and unbiased manner. Hospitals, at present, form the closest link between the medical profession and the public and the medical profession should do all it can to aid the hospitals to provide the very best service possible.

WHEN IS A MORON NOT A MORON?

During the past two years there has been a gradual change in public opinion as to what constitutes moronity. Dr. Carroll T. Jones in the January number of the *Journal of Delinquency* gives a very fair and clear description of the present day moron. We have selected from this article the following:

The term "moron" is the name for the highest grade of feeble-mindedness. For years men who have been dealing with social problems have realized that it is the moron who makes necessary a large part of their work. Just what a moron is and what should be done with him has not been until recently a difficult question to answer. Any student of social psychology will tell you very glibly that a moron is a high-grade feeble-minded person with a mental age of eight to eleven years and that he should be segregated for life in an institution. This sounds simple indeed and if it were entirely true the problem would not be as complicated as it really is.

The psychologists in the army, however, have upset us completely in our thinking and we no longer feel at all confident of the soundness of our theories as to what a moron is nor as to how organized society is to treat him. "When is a moron not a moron?" or "When is a moron not feeble-minded?" In the first place army psychologists have determined for the first time in the history of mental testing intelligence levels of thousands of adults representing probably a fair sample of the general population of the country. The results of their tests give startling facts regarding the distribution of general intelligence.

We should have from 25 per cent as the lowest estimate to 35 per cent. as the highest esti-

imated percentage of the general population classified as morons if we admit that our prewar-time standards of classification on the basis of mental age are correct. This is, of course, absurd in view of our well known definition of feeble-mindedness which states that a person to be feeble-minded must be suffering from an arrest of cerebral development so great as to make him incapable of maintaining himself in society independently of external support or to use another common term, to be incapable of managing his affairs with ordinary prudence. It is evident at once that a great many of this 30 per cent of men in the army were capable of managing their affairs with ordinary prudence and that they were maintaining themselves independently of external support before Uncle Sam took them into the army. In other words, a large percentage of them were meeting the social criterion for normality and consequently could not, by the most elastic use of the term, be considered as feeble-minded.

It is very plain to even the casual observer that a new concept of the moron must be formed to fit the facts set forth by our army psychologists. Certain other facts noted by psychologists in the army and by other experienced examiners are to be taken into account in revising our concept of the highest grade of feeble-mindedness, that is, moronity. Any experienced psychological examiner will admit readily that there are a great many individuals with a mental age rating of eleven years who are much more socially incompetent than many other individuals with a mental age rating as low as nine years. In fact it will be quite as readily admitted that there are many individuals who test as high as eleven and possibly twelve years who cannot meet the social criterion of normality and who must accordingly be classified as mentally defective, while there are also, on the other hand, large numbers of men who have mental age ratings as low as nine years and yet who are earning a good living, who are not dependent upon charitable organizations for help in any way and who are bringing up a family of children. This leads to the inevitable conclusion that mental age rating taken alone is not sufficient for making a diagnosis of feeble-mindedness or normality in persons who test between eight and eleven years mentally. There must be something, vague as it seems to be at present, which is the determiner for normality or feeble-mindedness which cannot be expressed in terms of intelligence level. To what extent this vague something depends upon the temperamental characteristics of the individual, to

what extent it depends it depends upon the early training of the individual, to what extent it depends upon the social heredity of the individual, we are not prepared to determine without a much more extended study of the whole problem.

The fact that the diagnosis of mental defect depends upon factors other than those of mental age, forces us to emphasize very much more strongly the social criterion as a part of our definition of feeble-mindedness. Our definition as stated by Tredgold still holds good and it does enable us to take account of the facts which have been brought to our attention by the results of mental testing in the army camps. If we realize that before we can classify a person as feeble-minded he must be suffering from an arrest of cerebral development which is roughly measured by a mental age rating of from eight to eleven years to such an extent that he cannot maintain himself independently of external support or cannot manage his affairs with ordinary prudence then we must realize that our examination should determine in some way whether or not he can meet this social criterion.

Let us again return to our first query, "When is a moron not a moron?" For all practical purposes a pre-war-time moron, or in other words, a person with a mental age of eight to eleven years is not feeble-minded until it has been determined with certainty either by trial or by some other method that he cannot maintain himself independently of external support or that he cannot manage his affairs with ordinary prudence. In view of this changed concept of the moron, the Bureau of Juvenile Research is diagnosing as feeble-minded only those persons who have after several trials shown that they cannot earn a living and that for their own protection and for the protection of society they must have institutional care.

JOHN STAYED: BILL WENT.

John and Bill lived in the same town, were in the same classes in public and high schools and on graduation both went to the same college. Eventually they both graduated in the same class from a Medical School and were again fortunate in continuing their pythian relationship in securing internships in the same hospital. Both eventually located in the same city but not near enough to have their offices in the same locality. For seven years they industriously devoted their time and efforts to build up their practices. One assisted the other when a case demanded and both frequently attended

in each other's company their medical meetings, the theater, dinners and other social functions.

As time went on they prospered and with increasing practice they eventually paid their indebtedness for education, internship, office equipment, automobiles and those other financial obligations that press heavily the first years of practice. They were held in high esteem by their patients and were spoken of as the coming leaders of their profession in that city.

Frequently, in the years that passed, in their meditation and communing hours they spoke of prospective homes, home life and comforts. They even confessed their admiration for and the personal attainments of a certain two members of the opposite sex. And then—

The United States declared war upon the Hun. The call for medical officers was issued and repeated with increased urgency on two subsequent occasions. Bill went: John stayed.

Their paths now diverged, the first in ten years. Bill after two months in a Base Hospital was assigned to an Evacuation Unit and sailed for France. There followed the long hours of duty after the big drives, mud, rain, cold, coarse food—no need to enumerate the personal discomforts that were experienced during the fourteen months in France. Bill went as a captain and remained a captain due to the orders of G. H. Q. The two hundred and twenty dollars per month created but a small reserve allowance when allotment, insurance, mess bill, etc., were paid, let alone the seven hundred dollars invested in **military uniforms** and equipment. Still Bill did not complain for the inspiration was his that he was doing his patriotic duty and was serving in bringing comfort and returning life to the Doughboy who too gave his all to the cause.

But what of John? With fewer doctors at home greater demands were made for his services. The flu epidemic came on and for weeks he was on a continuous round of calls with but little rest. Then came the armistice, a fleeting few weeks of spasmodic patriotism welcoming those who obtained early discharge from military service and then the mad scramble for business and money. John now charged three and five dollars for calls, received increased office fees and more surgery with its financial recompense. The hospital staff was reorganized; John received a staff appointment as also revenue producing industrial positions. In brief, he prospered by leaps and bounds. Investments doubled and tripled in the rising market and his bank account was well into the five figures. Spring came. Bill was still in France, for the

wounded and sick were not all evacuated. John, moved by the spring's awakening, purchased a modern home and won the consent of one to share it with him. A wedding of some note, a brief honeymoon, and John returned to his now lucrative practice, home life and the social world. Bill was still wallowing in the mud of France at two twenty per month.

John continued in his prosperity, refurnishing his office with new mahogany furniture, a private nurse and "appointments." Whenever or wherever the opportunity presented John reinforced the foundations of his practice and enhanced his financial standing.

Eventually Bill received his embarkation orders. There followed the uncomfortable railway journey to embarkation camp, ten days in that so-called "rest camp" before his name appeared on the sailing list. At last aboard ship, sailing out of harbor New York bound, Bill is leaning over the stern rail and finally when the shore line grew dim on the horizon, he roused himself and, with a heavy sigh, spoke: "So that was France."

There followed thirteen days of water, water, water. At last land Ho, and New York's shoreline clears in the distance, the sky scrapers loom up, the Mayor's Boat and Band steam up in welcome—yes it's a tear Bill brushes from his eye, for though it is June, the armistice eight months old, this is God's country and Bill is about to step on his homeland shore. Down on to the dock, down the river on a ferry and out to Camp Mills. Yes, New York was so accustomed to welcoming returning men, the uniform was still common on the street and they didn't know Bill had just returned—the welcome was tame.

Five days in Camp Mills, then orders, a thirty-six hour ride in a day coach with other troops and garrison rations when finally his homestate camp was reached at one o'clock at night in a pouring rain.

The next morning Bill was over to the "mill" bright and early, was run through, then to the personnel adjutant—the last voucher, bonus of \$60, questionnaire; yes, he answered, his army experience and life had been profitable, on the questionnaire to be filled. Yes, also, that he had unsettled claims; no, he didn't want a reserve commission, etc., This detail complied with he hung around until 3:00 p. m. for official orders, got his, his white discharge paper, a quick run to the Disbursing Quartermaster, \$186.00 in bills and—Bill was no longer a soldier—Uncle Sam found he could dispense with his services. A taxi, barracks call, bedding and

hand roll and locker, a speed breaking run to the station and Bill was headed home(?). Yes, he had wired John when he would arrive but John had an important dinner engagement he couldn't break so no one was there to meet Bill.

As he rode up the street he was filled with emotion on seeing the familiar sights—oft dreamed of while "over there." To the hotel—the room clerk greeted him with—"Why hello Doc, where have you been all the while since November"—sure fix you up with a nice room but I'll have to charge you \$5.00 per now, —everything's gone up. Going to start to practice again?" Bill goes to his room washes up and picking up a phone calls John's house. Yes, John comes to the phone from his formal party dinner table—Oh, hello, Bill, so you got in all right. Sorry I was tied up and couldn't meet you. I don't see how I can get away now—wife's repaying some of her social debts so we've got a party on and of course I am due to remain here. What? Oh, yes, that trunk with your clothes that you left with me, why it's up in my garage. Why, yes, send out a drayman and I'll tell my man to give it to the transfer man you send. Well, so long, see you tomorrow, for a moment, because I am beastly busy.

Bill gets his trunk; off comes "putts," O. D., flannel shirt and thanks to the ward-robe trunk Bill puts on a presentable suit of civies—well he is now really out of the army.

The next day or two Bill is about meeting former acquaintances. Invariably he is greeted "Why hello Doc, back are you? Had a great experience I'll bet." and on they would go, imbued with some mad spirit of rush—"to get while the getting's good." As a final thrust Bill meets a former intimate friend—"Hello, Bill, where have you been all the while? War, Hell, war's been over eight months, what you been doing, joy-hopping around France?"—That's the last straw—with \$140 in his pocket, his sole capital, Bill perceives it is up to him to get back to practice.

But—the old office is rented—"Sorry we tried to hold it for you, Doc, but you stayed away so long, offices were in great demand so we got an offer at double the rent you used to pay and we gave a lease. No, we haven't another suite in the building vacant."

In his quest for offices the next two days Bill learns that every desirable office suite is leased, and a number of new doctors have located in his old vicinity—men who came to the city from smaller towns and feathered themselves in while the other fellow was in service. Desperate, Bill finally finds three rooms over

a millinery store on a side street. He gets his furniture out of storage, settles as best he can. No, he can't even get his old telephone number back—that has been given to one of the "Docs" who moved into the neighborhood soon after Bill left. Bill digs up his old ledger and sends out cards announcing his return from military service and resumption of practice—and waits. And Bill waited.

No need to describe the three or four months of wearisome, discouraging days of enforced idleness with each day bringing to light some new illustration of how well his practice was cared for while he was in service—so well in fact that the "care-takers" were too busy caring for it that their time for welcoming Bill was nil.

No need either to recite the depression Bill felt after the strenuous days of military life in the "let-down" of resuming practice. We can pronounce little censure if he did cuss some, if an inner bitterness developed and the wish almost became a reality to return to an army life and work.

A year passed, true Bill has become somewhat more re-established, he is fairly busy and the prospects are good that he will justify the prophesy of a successful career. However, no amount of prosperity or activity will wipe out the rancor that lies deep within him and the resentment that he is so greatly conscious of on account of the treatment that was accorded to him. Especially is this true because today he still feels he has been the victim of the avarice-ness, jealousy and unpatriotic travesty of his colleagues. A feeling, a rancor that at times makes him so bitter as to wish to disclaim all relationship to his professional brothers and rise up in open revolt.

Such is Bill's state of mind. We as his associates do not recognize it, neither do we advance to ascertain what it is that has changed Bill.

There are a good many in Michigan who have had Bill's experience. We have but hurriedly sketched his return and resuming practice encounters. Our purpose is to arouse the doctors, in every community that has a "Bill" to stop today, call on Bill, sincerely demonstrate that you are not patronizing him but are honestly in earnest to assist him in solving his problems, aid him in his work and restore to him his

confidence in his fellow workers. Do it for Bill—will you?

Editor's Comment: The above contribution is given space because we believe the writer describes a state of mind, a series of experiences and an organized profession's neglect and forgetfulness of those of our number who made the personal and financial sacrifice called for by their military service. Those who went did not all encounter or pass through Bill's experience—still there are some who did. It is for these that we urge that as fellows we now make good our promises and help the Bills who may be among us in various parts of the state.

Editor.

Editorial Comments

And right in the down town streets of Chicago we see in drug and department store windows—"Spring Tonic—78 cents." People still fall for that line of dope. But really we supposed Chicago had been educated.

With the A. M. A. having gone on record as definitely opposed to Compulsory Health Insurance, with the discussion and action taken at our Kalamazoo meeting there exists no excuse for any of our members not being informed upon the subject. Now, having that information get in touch with your senators and representatives, enlighten them and secure their support in opposing any attempt to introduce any such bill in our legislature this winter. It is imperative that this campaign be undertaken and the co-operation of your representatives in our State Legislature obtained now.

The complete minutes and transactions of our annual meeting in Kalamazoo will be published in our July issue. It was inadvisable to hold our June issue to include the report in that number.

It will be of interest to physicians, druggists and others, to know what has been accomplished by the Michigan Department of Health in obtaining co-operation of druggists in conducting a Venereal Disease campaign.

The Venereal Disease Law, as passed by the Michigan Legislature of 1919, required, briefly—druggists to report Venereal Disease prescriptions when marked as such, to the Michigan Department of Health and also to discontinue dispensing medicine to Venereal Disease patients.

The following is a brief report of the work during the first six months:

Druggists reporting prescriptions	1100
Physicians writing prescriptions	1224
Estimated number of druggists in the state	1721
Percentage of druggists reporting	63.91
Total number of prescriptions reported	14823
Number of Venereal Disease cases reported by physicians	10055

Remarks: It is interesting to note that during this short period nearly 64% of the druggists have reported. It will also be noted that out of the 1,100 druggists, there were 1,224 physicians writing prescriptions, which in all probability indicates that each physician has his favorite drug store to which he refers his patients. Further, it also indicates that the number of physicians doing Venereal Disease work is not as large as would be expected. It is well known in this state that Venereal Disease patients are usually referred by their attending physician to a physician doing special work, which helps to account for the above figures. There were approximately one and a half prescriptions written by each physician for every case of Venereal Disease reported during the six months.

Signed. R. M. Olin, Commissioner,
Michigan Department of Health.

June, summer, vacation time. Surely most welcome after the severe winter and late spring. Yes, we trust everyone of our readers will avail himself of two to four weeks' rest and outing. Get out and away from your home for play. You will find on your return that you have a new hold, received inspiration and—oh well, life and work will be more worth while.

Last month we published a contributed editorial on the need of civic organized health center administration bureau. We believe the subject of sufficient importance to merit a broad discussion directed toward a reform in our present methods. We invite a full expression of opinions and constructive criticism. As professional men we must interest ourselves in increasing degree in solving these problems. It's past time that we stepped down from the gallery of passive observation and become active actors in the arena.

The efforts of those of the profession who are in touch with the political leaders of the two principle parties bid fair to have a plank inserted in their national platforms favoring and declaring for a department of public health with a president's cabinet officer at the head. As a profession we should singly and collectively voice our approval and record our requests for the consummation of this so necessary public office and department. We in Michigan must shoulder our responsibility to secure this needed cabinet officer. To that end do we request your co-operation and influence.

The State Commission of Public Health and the State Director of Public Health are performing creditable service. They are bringing about better health and sanitary conditions in Michigan. Their work is effective and results thus far are splendid. However, they will never attain the

highest results or greatest ends until they take the profession into their confidence, discuss their plans with them and secure wide-spread co-operation. Upon several occasions we have invited them to utilize The Journal for the purpose of reaching the profession. Our invitation has not been accepted—we wonder why?

The demand for trained nurses is far in excess of the number available. With the demand there has come, like in all other things, a higher charge for nursing service. A trained nurse now receives from \$35 to \$50 per week. As a result the sick who require trained nursing care are unable to pay, in many instances, this weekly fee, and thus are compelled to enter hospitals. There has then followed an overcrowding of our hospitals so that it is becoming more difficult to secure hospitalization of patients.

The wages paid in office and industries have increased to such an extent that young women today select these positions in preference to a nursing career. Consequently the applicants to hospital training schools are small in number. As a result our hospitals, with the increased demands made upon them, are hard pressed because of their inability to secure pupil nurses.

The condition is a grave one throughout the country and affects our large and smaller hospitals alike. It is a state of affairs in which the profession is deeply concerned and which the profession must aid in solving. Every doctor should subscribe his support and aid in securing a sufficient number of applicants for training school classes.

Among your patients, somewhere in your community you will find two or three young women who could become excellent and efficient nurses. A talk with them, even if it takes some of your time, the setting forth of the need for nurses, the features of a nursing career, the life long value of the training given and how they would make desirable candidates. Urge upon them to take the training course and give them a letter of introduction to your nearest hospital in order that the hospital authorities may have the opportunity of talking with them. What is needed is candidates and you, doctor, can materially aid in securing them.

We are calling for your assistance and urge that you respond to the extent of securing the interest of at least two young women in your vicinity and encourage them to take training in some one of our Michigan hospitals.

Deaths

Doctor Arthur Emery Greene died at his home in Lansing April 17 at the age of forty-four following a brief illness with inflammatory rheumatism and heart trouble.

Doctor Greene was a graduate of the University of Michigan of the class of 1902 after having taken a preparatory course at Olivet. He practiced in Leslie for a number of years, was city physician in Jackson for one year, and had prac-

ticed in Lansing nearly a year where he devoted his entire time to pediatrics.

Doctor Greene is survived by the widow, two sons, one daughter, one sister and six brothers.

Doctor W. T. Lungerhausen, prominent Mt. Clemens physician, died Monday morning, May 3, following a stroke of apoplexy Sunday evening.

Doctor Lungerhausen was born in Mt. Clemens in 1877, and was a graduate of the University of Michigan. Surviving are the widow, two sons, the father, two brothers and one sister.

Doctor William C. Bell, assistant surgeon of the Detroit police department since September, 1917, died of pneumonia May 19, 1920. Doctor Bell was born in Detroit, April 28, 1886, and spent his entire life in that city. In 1911 he graduated from the Detroit Homeopathic College. Since that time he has maintained a private practice in addition to his duties with the police department. His widow, Mrs. Winifred Bell, and two sons survive him.

State News Notes

Well established practice, 12 miles from Flint, Mich., on Dixie Highway. Steam and electric railway, good schools and churches; roads gravel or cement, thorough introduction. Can turn over several old line insurance appointments. Competition small, consisting of one man, located only one week. Village 2500, very good farming country. Leaving on account of poor health. Address care Journal for full particulars.

General practice and drugs, unopposed village practice and only one drug store, rich farming community, good schools, roads, and churches. Collections in 1919 over \$9,000.00 Monroe County, Edison lights, Rexal Agency. Contents of drug store for sale. Care Journal.

Fifty-four employes of Oak Grove sanitarium received an unexpected windfall last evening when at the instance of Dr. C. B. Burr, they were called together in Noyes hall, one of the auditoriums at the institution, and were given extra compensation in amounts ranging from \$160 to \$4,800 each, in recognition of meritorious service. The amount distributed was \$60,000, and an additional \$10,000 was apportioned among the members of the medical staff of the institution.

The plan for the distribution of a share of the profits of the Oak Grove corporation, on the eve of its dissolution, was worked out by Dr. Burr, president of the corporation and superintendent of the institution, and it had previously received the expressed approval of the holders of 93 per cent. of the stock, and the tacit consent of the other stockholders. The apportionment was made on the basis purely of years of service at the institution, the \$4,800 allotment going to an employe who had been with Oak Grove for the last 30 years.

Following the purchase of the property of the

sanitarium by the city for a high school site, it was determined by the corporation to liquidate its assets and go out of business. For a time it was hoped that the business of the institution might be continued by a new corporation which planned to purchase the old Flint Country Club property in Atlas for the purpose, but this plan it is understood, has been abandoned. So, within the next few weeks, the last of the patients will leave Oak Grove and the sanitarium will cease to exist. Work on the new high school at Oak Grove will begin this week, in the hope that the school may be ready for occupancy a year from next September.

The affair at Noyes hall last night was unique in many particulars. Employes of the institution did not know for what reason they were called together until Dr. Burr addressed them. He expressed his own regret and that of the directors over the circumstances which made advisable the closing of the institution and as a result the severance of relations between employers and employes. He told of the earnest cooperation that the institution had enjoyed from its employes and pointed out the part that their faithful work had played in the success of the sanitarium. In recognition of this, he said, the officers and directors and stockholders-at-large felt that the employes were entitled to a share in the distribution of the corporation's profits and that it was the consensus of opinion among the stockholders that they should be rewarded accordingly. Emphasizing this point, he referred to the fact that if all of the employes had worked indifferently, giving merely value received for their wages, the institution would have been less successful.

Here, he said, was an exemplification of the truth which should be obvious to everyone, that no one should live to himself alone, that the individual weal and the common weal are identical, that all we have is owing to society, that class action and individual greed are unprofitable, and that there is nothing in the world commercially, to say nothing of sentimentally, worth while except reciprocity and the square deal.

Dr. Burr announced then the plan for the distribution of the \$60,000, which was based exclusively on length of service. In spite of the fact that it all came as a complete surprise to them, a number of the employes responded feelingly, expressing their gratitude for the consideration given them and their own regret over the breaking up of the Oak Grove organization.

In making the distribution it was brought out that one employe had been with the institution for 30 years, two for 28 years, one for 26 years, two for 21 years, one for 20 years, two for 18 years, one for 16 years, one for 15 years, one for 13 years, one for 10 years, one for 9 years, one for 8 years, two for 7 years, two for 6 years, one for 5 years and 33 for less than 5 years.

Those of the employes receiving \$1,000 and upwards were given \$1,000 high school bonds of which 43 were distributed from the \$650,000 in bonds accepted by the corporation from the board of education in payment for the Oak Grove property. These bonds, accepted at par, and \$100,000 in cash made up the price of the property, for which the money was voted by the taxpayers of

the union school district comprising the city of Flint.

In instances where the bonds did not pay the full amount of the apportionment, and where the amount apportioned was less than \$1,000, the employees were given cash orders, payable on or before June 15. The form of these orders was as follows:

"Due to ——— from the Ship at the option of the Purser on or before June 15, 1920, the sum of ——— in cash or its equivalent.

"This memorandum must be preserved and returned when requested by the Purser."

A number of the officers and directors of the corporation were present at the function.

Detroit's venereal clinic is the largest of its kind in the United States.

Maj. Lee Alexander Stone, M.D., regional consultant of the United States Public Health Service, and Supervisor of Social Hygiene work in Michigan, Wisconsin, Illinois and Indiana, after completing a survey in Detroit, was so enthusiastic over the fine results being accomplished through the Department of Health venereal clinic, that he announced his intention to recommend the use of the Detroit clinic as a model for the establishment of similar clinics in other cities throughout the United States.

The annual clinic of the alumni of the Detroit College of Medicine and Surgery will be held in Detroit, June 14 to 18 inclusive. Daily Clinics will be held from 9 to 1 and from 2 to 5 at Harper, Grace, St. Mary's, Providence, Children's and Herman Kiefer Hospitals. Besides the leading specialists of Detroit, several prominent out-of-town men will be present, including such as Dr. Howard Lilienthal, of New York City, Dr. Emil Goetsch, of Baltimore, and Dr. James B. Herrick, of Chicago. All physicians of the state are cordially invited to attend these clinics.

Don M. Griswold, M.D., M. P. H., has resigned as director of Medical Service, Department of Health, to accept the chair of Public Health and Hygiene at the Iowa State University.

Dr. Griswold entered the service of this department in 1913. He was the first resident physician at the Herman Kiefer Hospital, and later was Director of Laboratories for the Department of Health. In 1915 he accepted a call from the Rockefeller Foundation, spending two and one-half years studying tropical contagious diseases in South America and the West Indies, also typhoid and malaria in the Southern states. In the course of this work Dr. Griswold collected 3,000 photographs of interesting cases.

During his service with the army Dr. Griswold was hospital epidemiologist at Camp Taylor. Later he was promoted to assistant division surgeon of the 97th Division. Dr. Griswold returned from army service to become Director of Medical Service in the Department of Health.

Dr. Griswold carries with him the best wishes for his future success from a host of friends in the department, as well as in local professional and educational circles.

An attorney wrote a gentleman recently, urg-

ing him to pay an account that was long past due and that had been placed in the attorney's hands for collection. Following is the text of the reply received by the local lawyer:

"For the following reasons I am unable to send you the check you have asked for:

"I have been held up, held down, sandbagged, walked on, flattened out and squeezed; first by the government for federal war tax and excess profits tax, liberty loan bonds, thrift stamps, capital stock tax, merchant's license, merchant's bond, auto tax, and by every society and organization that the mind of man can invent, to extract what I may or may not possess; from the Society of St. John the Baptist, the G. A. R., the Woman's Relief, the Navy League, the Red Cross, the Double Cross, the Children's home, the Dorcas society, the Y. M. C. A., the Y. W. C. A., the Boy Scouts, the Jewish Relief, and every hospital and church in town.

"The government has so governed my business that I don't know who owns it. I am inspected, suspected, examined, re-examined, informed, misinformed, required and commanded, so I don't know who I am, where I am, or why I am. All I know is, that I am supposed to be an inexhaustible supply of money for every known need, desire or hope of the human race; and because I will not sell all I have, and go out and beg, borrow or steal money to give away, I have been cussed, boycotted, talked to, talked about, lied to, lied about, held up, robbed and nearly ruined. The only reason I am clinging to life is the insane desire to see what in h—l is coming next."

At a meeting of the members of the Antrim, Charlevoix and Emmet County Medical Society, the Tri-County Medical Society of the Cadillac Region, and the Grand-Traverse and Leelanau County Medical Society at Charlevoix, the Northwestern Michigan Clinical Society was organized.

Dr. Armstrong, of Charlevoix, was elected president; Dr. Fralick, of Maple City, vice-president, and Dr. B. H. Van Leuven, of Petoskey, secretary and treasurer.

The object of this society is to promote a closer harmony among the medical profession of the northern part of the state, and make use of the available clinical material. The society will work in conjunction of the extension school of the University of Michigan medical department.

Doctor W. G. Hutchinson of Detroit was elected Third Vice-President of the Michigan Mutual Life Insurance Company, June 19, 1920. Doctor Hutchinson graduated from the Detroit College of Medicine in 1897. For many years he was on the attending staff of the Children's Free Hospital of Detroit and a teacher in the Detroit College of Medicine. Some years ago Doctor Hutchinson became Medical Director of the Michigan Mutual Insurance Company.

Dr. Guy L. Kiefer, of Detroit, has been appointed Medical Director of the Michigan State Telephone Company. He succeeds Doctor R. B. Hasner. Doctor Kiefer assumes these new duties June 1, 1920. It is hardly necessary to mention

the various honors which have come to Dr. Kiefer. He has been president of both the Wayne Co. Medical Society and the Mich. State Med. So. For six years he was Wayne Co. Physician and for twelve years he was Health Officer of Detroit. He is Professor of Preventive Medicine and Public Health in the Detroit College of Medicine and Surgery. At present he is President of the State Board of Health and member of the Council of Michigan State Medical Society.

The Wayne County Medical Society elected the following officers on May 17, 1920:

President—Harold Wilson.

Vice-President—C. D. Brooks.

Secretary—J. H. Dempster.

Trustee—George E. McKean.

Dr. Louis J. Hirschman of Detroit was elected chairman of the section on gastro-enterology and

proctology at the New Orleans meeting of the A. M. A.

Dr. H. H. Hammel of Tecumseh has been appointed health officer of that township.

Seventy-seven Michigan members attended the New Orleans meeting of the A. M. A.

Dr. Harold Williams Wiley has located in Grand Rapids and will limit his practice to obstetrics.

The Michigan Trudeau Society held its spring meeting in Ann Arbor May 24. A splendid program of papers was presented.

Dr. E. K. Cullen and Miss Charlotte M. Macklem, of Detroit, were married April 28.

COUNTY SOCIETY NEWS

It is the Editor's desire to have this department of the Journal contain the report of every meeting that is held by a Local Society. Secretaries are urged to send in these reports promptly

DICKENSON-IRON COUNTY

The first meeting of the year was held at Crystal Falls, May 12 with Dr. W. J. Anderson in the chair.

The matter of Compulsory Health Insurance was taken up and the society was unanimous in its verdict against it. Further, the delegate to the state meeting was instructed to do all in his power against the measure.

An outline of a programme was made up and the first Wednesday of each month was selected for the regular monthly meeting. There will be one or more papers read at each meeting and following each some social affair will be arranged.

The next regular meeting will be held in Florence, on June 2, at which time Dr. C. F. Larson, of Crystal Falls will present a paper.

A campaign for new members is now on, also to get any delinquents back in the fold again.

L. E. Bovik, M.D., Secretary.

OTTAWA COUNTY.

The Ottawa County Society monthly meetings continue to be interesting and enthusiastic. The noonday luncheon feature has served to produce an esprit de corps, which adds much to the pleasure as well as the profits of the meetings.

The time at the April meeting was taken up by a discussion of the Compulsory Health Insurance question. The whole matter was thoroughly and freely debated from every angle, with the result that everyone present went away with his mind thoroughly clarified on the question. A resolution was adopted instructing our delegates to oppose the proposed legislation as presented

in the measures emanating from the American Association for Labor Legislation.

We are happy to report that one of our veteran members, well-known because of his past interest in the county and state society activities, Dr. D. G. Cook, who has been laid up since last Christmas with an attack of meningitis lethargica, is making a good recovery, and will apparently be able again to take his place in the society before long.

A. Leenhouts, Secretary.

Book Reviews

HANDBOOK OF DISEASES OF THE RECTUM. Louis J. Hirschman, M.D., F.A.C.S., Third Edition. Price \$5.00. C. V. Mosby Co., St. Louis, Mo.

Revised and thoroughly abreast of present day knowledge and progress, Dr. Hirschman has again made available a very useful and valuable text for the general practitioner.

Well illustrated, clear in discussion, practical in application and definite in treatment the work is of unusual merit and will be found of distinct aid to every student and doctor.

We have a high regard for it and commend it unhesitatingly to every reader. Personally we would not be without it.

SURGICAL SHOCK AND THE SHOCKLESS OPERATION THROUGH ANOCI-ASSOCIATION. By George W. Crile, M.D., Professor of Surgery, School of Medicine, Western Reserve University, Cleveland; and William E. Lower, M.D., Associate Professor of Genito-Urinary Surgery, School of Medicine, Western Reserve University, Cleveland. Second Edition of "Anoci-Association" Thoroughly

Revised and Rewritten. Octavo of 272 pages with 75 illustrations. Philadelphia and London: W. B. Saunders Company, 1920. Cloth, \$5.00 net.

This volume imparts the theory and conclusions of the author's extended experiments and observations on shock. In addition there is discussed the theory and principles of auoci-association and the technic of nerve blocking.

It is a most valuable scientific contribution, meriting our sincere commendation and admiration. It is an epoch making work.

DISEASES OF THE CHEST AND THE PRINCIPLES OF PHYSICAL DIAGNOSIS. By George W. Norris, M.D., Assistant Professor of Medicine in the University of Pennsylvania, and Henry R. M. Landis, M.D., Assistant Professor of Medicine in the University of Pennsylvania, with a chapter on Electrocardiograph in Heart Disease, by Edward Krumbhaar, Ph.D., M.D., Assistant Professor of Research Medicine in the University of Pennsylvania. Second Edition, Thoroughly Revised. Octavo Volume of 844 pages with 433 illustrations. Philadelphia and London: W. B. Saunders Company, 1920. Cloth \$8.00 net.

The authors' first object was to write a practical book upon the subject; in this they have succeeded. Of especial interest is the discussion of diagnostic acoustics and the information given is just what many have been looking for and found wanting in other texts. The work is enhanced by the splendid illustrations that enrich the text and add to the instructive value of the volume.

We are certain that this work should be included in every physician's library because it cannot help but serve as a most practical aid in the diagnosis and treatment of diseases of the chest and heart. We recommend it most heartily and congratulate the authors for having made available so instructive a text.

ORTHOPEDIC AND RECONSTRUCTION SURGERY, INDUSTRIAL AND CIVILIAN. By Fred H. Albee, M.D., F.A.C.S., Professor and Director of Department of Orthopedic Surgery at the New York Post-Graduate Medical School and at the University of Vermont. Octavo volume of 1138 pages with 804 illustrations. Philadelphia and London: W. B. Saunders Company, 1919. Cloth \$11.00 net.

Time has demonstrated that orthopedic surgery can accomplish much in the correction of congenital deformities. As time passed these corrective procedures passed the boundaries of congenital deformities and entered into a broader field of reconstructive surgery for all anatomical deformities, congenital or traumatic. The war caused a greater impetus and with the large number of cases, the results attained and methods employed we now have established definite principles and practices.

The author, recognized for his ability, here presents us with a broad discussion of the subject. It is indeed a most worthy text that is bound to receive a cordial reception. It is the foundation reference essential to every surgeon who undertakes reconstructive surgery procedures.

Miscellany

WHEN IS A MORON NOT A MORON?

For all practical purposes a pre-war time moron or in other words a person with a mental age of eight to eleven years is not feeble-minded until it has been determined with certainty either by

trial or by some other method that he can not maintain himself independently of external support or that he can not manage his affairs with ordinary prudence. In view of this changed concept of the moron, the Ohio State Bureau of Juvenile Research (Columbus) is diagnosing as feeble-minded only those persons who have after several trials shown that they can not earn a living and that for their own protection and for the protection of society they must have institutional care. (Jour. of Delinquency, Jan. 1920, C. T. Jones.)

YELLOW FEVER.

Summary—

1. Clinically yellow fever is similar to infectious jaundice. The differences existing between the two diseases appear to be chiefly those of degree. There is more marked jaundice and less hemorrhage in yellow fever than in infectious jaundice.

2. Although hemorrhage is a usual occurrence in all severe cases, yellow fever is not a true hemorrhagic disease. The hemorrhage apparently follows necrosis of parachymatous tissues and endothelial cells.

3. The jaundice of yellow fever appears to be of a non-toxic dissociated hepatic type.

4. Death appears to be due to uremia. It is usually preceded by anuria. There is an intense degeneration of the epithelium of the convoluted tubules. The glomeruli and collecting tubes remain relatively free from degeneration.

5. Convalescence in all patients who survive is prompt. The complete restitution of all organs to normal is remarkable. (Arch. of Int. Med. Feb. 1920, Chas. Elliott.)

COLLOIDAL GOLD REACTION.

Summary—

1. Colloidal gold test is the most delicate of the routine spinal fluid reactions.

2. It does not replace any other test but is of independent value.

3. It is of special importance in the early diagnosis of neurosyphilis.

4. Patients with no involvement of the nervous system or who are non syphilitic give no colloidal gold reaction.

5. A curve in zone III with a negative or faintly positive globulin test is strongly suggestive of a cord or brain tumor or myelitis.

6. Curves in zones I and II may be found in non syphilitic conditions such as multiple sclerosis and brain abscess.

7. A cell count above 5 is pathogenic but the cell count is of no value indicating duration or severity of the process or improvement.

8. This reaction should be included in every spinal analysis and neurologic examination as well as in all cases of general syphilis. (Arch. of Int. Med. Feb. 1920, Warwick and Nixon.)

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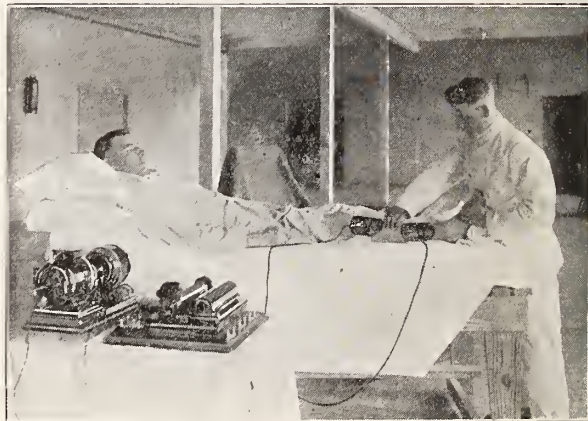
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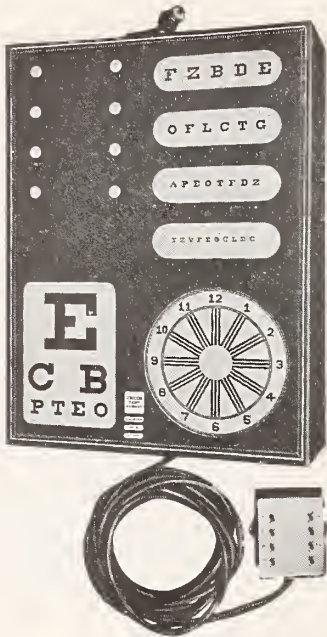
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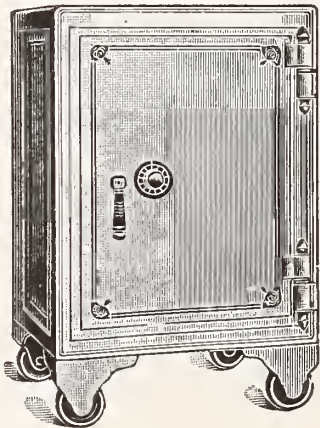
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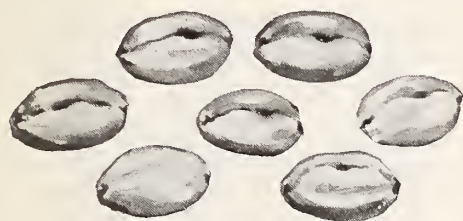
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	1913		1914		1915		1916		1917		TOTAL	
	Numb. Cases	Fatal	Numb. Cases	Fatal	Numb. Cases	Fatal	Numb. Cases	Fatal	Numb. Cases	Fatal	Numb.	Fatal
Arizona	1										1	
California	1						1				2	
Colorado									1	1	1	1
Florida			1	1							1	1
Georgia					1	1					1	1
Idaho			1	1							1	1
Illinois	2	1	4	1	6	2	9	3	7	2	28	9
Indiana			8	2	2		1				11	2
Iowa			7	1	4	1	3		3	1	17	3
Kansas									4	1	4	1
Kentucky			2	1							2	1
Massachusetts					2	1					2	1
Michigan	6	2	3	2	2	1	1				12	5
Minnesota	2	2	5				10	6	2	1	19	9
Missouri					1	1	2	1			3	2
Montana							1	1			1	1
Nebraska			2		1		3	1	1		7	1
New Jersey			2						1		3	
New York			2		1						3	
North Carolina			1								1	
North Dakota	2	1	2				2	2	2		8	3
Ohio	2		3		1						6	
Oklahoma	1	1			1						2	1
Oregon	1										1	
Pennsylvania	1	1	3	1	2		4		1		11	2
South Carolina									1		1	
South Dakota							1		1	1	2	1
Vermont							1				1	
Washington	1										1	
Wisconsin	1				2	1	2	1			5	2
Canada			1	1					1	1	2	2
	21	8	47	11	26	8	41	15	25	8	160	50

RECAPITULATION.

	1913	1914	1915	1916	1917	Total
Fatal	8	11	8	15	8	50
Recovery Doubtful		6	4	3	3	16
Recovery Probable	12	31	14	23	14	94
	20	48	26	41	25	160

Ninety per cent of all cases occurred during July, August, September and October.

The similarity of symptoms to those of cholera infantum make it practically certain that many cases of poisoning from arsenical fly destroyers are not correctly diagnosed. The children are in most cases too young to realize or to tell what they have done, and unless actually seen taking the poison, their illness is apt to be diagnosed as cholera infantum. The remedy for arsenic is not given and the case is treated as cholera infantum, which is, of course, prevalent at the time these fly destroyers are in use.

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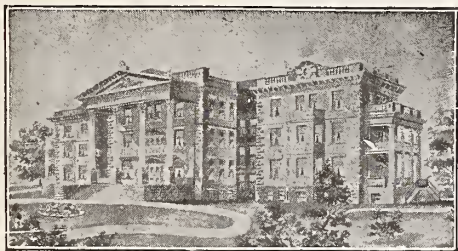
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CHANGES IN THE RELATIONS OF THE PUBLIC AND THE MEDICAL PRO- FESSION.

PRESIDENT'S ANNUAL ADDRESS.*

C. H. BAKER, M.D.,
BAY CITY, MICH.

When man first gathered into communities and portioned his activities so that each followed a single occupation, the knowledge of medicine was confined to a few individuals. Because this knowledge was so specialized and personal in its nature, the physician developed into the individualist he has always been and it was not until the public began to take a collective interest in the practice of medicine that the doctor developed any sort of class consciousness or took any collective action for either his own or the public welfare. With the rise of public interest in medical matters the relations of the doctor and the public rapidly changed.

From being the personal and family councillor, the friend and ready refuge in time of trouble, the doctor has begun to be looked on by many in much the light of a skilled artisan, or an expert in mechanics, whose services you buy and then forget until he may be needed again.

The State, which is only a mass name for all the public, early started directing the current of medical development and it is interesting to see the length it has gone in controlling the activities of the medical profession and the demands it is making on his time and services.

The first movements in this direction were blind and groping but they are fast coming to be directed by a definite purpose.

For example: the insane used to be treated worse than the dumb brutes and were farmed

out to ignorant peasants, if able to work, and if not were manacled in dirty buildings or locked in solitary confinement, like the worst of criminals. Then as a matter of economy they were gathered into groups where maintenance was cheaper and their presence in the community was less noticeable than when living in scattered homes.

Under the guidance of medical men the insane have come to be looked upon as unfortunate sick men instead of men possessed by devils and their places of detention are now sanatoria for their cure or homes for the incurable.

The epileptic were next assorted for study and treatment and assembled in homes where their presence in the community would be less disquieting to the public and to themselves. We are now doing the same with the mentally sub-normal but are as yet only touching the fringes of what remains to be done in this direction.

With the discovery of the infection of tuberculosis the demand for sanatoria for segregation and treatment grew apace and the time is not far distant when the living of a case of active tuberculosis outside a sanitarium will be the exception.

DEMANDS UPON THE DOCTOR.

The State steps in and orders the doctor's activities in a constantly widening area. It requires the doctor to report all births and to certify the cause of all deaths. To report all cases of contagious disease, the number of which is continually being increased. It uses him in the Marine hospital and pension service and recently has added the Public Health Service calling on scores in each State to care for the returned soldiers. The Red Cross demands his time and that which he gives the public gratuitously in school and charity clinics is also growing more burdensome. The services of the public in groups is rapidly spreading. Societies originally purely social, are adding medical service to their activities, there is a growing number of mutual societies and Sick Insurance

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companies. Mines and manufacturing companies now employ medical staffs, and towns and villages are compelled by the shortage of medical help to offer bonuses to get men to locate in their midst, with the result of more and more owning and ordering the doctor to do their bidding.

With the wave of public service rushing ahead like the growing tide to what may we look forward in the future?

STATE MEDICINE.

The growth of State medicine is rapidly cutting the ground from under the feet of the private doctor. In the cities public milk stations have lessened the infant sickness and death to an amazing amount. Anti-spitting ordinances, inspection of bakeries, butcher shops, dairies, packing houses and water supplies have effected a tremendous lessening in the total sickness, and in spite of the growth of population, there has been a simultaneous diminution of the sick and death rate all along the line. Public medicine took a strangle hold on the plague situation in San Francisco in 1900 and, first showing up the chicanery of the public officials in their efforts to conceal the presence of bubonic plague, it set to work rat proofing the city, killing the rats and ground squirrels that harbored the fleas which were the plague carriers. In 1904, Col. Gorgas was given free hand in Panama, resulting in stamping out yellow fever and malaria and making the completion of the canal possible. In 1907, the meat packers bill brought them to their senses and the pure food act cut most of the tenacles off the patent medicine octopus. School hygiene is becoming an integral part of our school system as we are recognizing that the health of the young is the shortest cut to the health of the nation. Factory inspection, tenement house legislation, free clinics, free vaccination and anti-toxine; thymol in Porto Rica for hookworm, quinine in the ague belt, the next step will be typhoid vaccine furnished free; all these are driving the old-fashioned doctor to the wall.

As a result of the diminishing disease and the corresponding falling off in income, together with the raising of the standards of medical education, whereby a medical student must spend at least seven years in getting his education, the actual number of medical students in the country fell from 25,000 to 22,000 in the four years from 1904 to 1909, while the population of the country increased four millions in the same time. Should these ratios continue the public will soon be suffering from a dearth of skilled medical services as is al-

ready the case in many rural communities. A recent survey shows eighty towns in Massachusetts without physicians!

The remedy has been sought in lessening the length of time required by a medical student to get his education, but a far better way will be to lessen by methods well proven, the total amount of sickness to be treated.

Do you realize what would happen to the race if the people put into effect the methods now known to prevent disease?

Suppose we compelled vaccination of every person now living and all born in the next ten years, small pox would vanish from the earth! If we gave preventive vaccine to every body and abolished sewage contamination of rivers and wells and the open storage of manure in which the typhoid fly is bred, there would be no more of the fearful waste and suffering by that terrible disorder.

No spitting, and isolating the carrier, would eliminate tuberculosis; free antitoxine and isolation of all cases of the common diseases of childhood during the active period and for two months after recovery would finally eliminate scarlet fever, measles, whooping cough, mumps and chickenpox. Were all these diseases thus cut off there would be at least one-fourth less physicians needed than at present.

Then, if we enforced the existing laws for quarantine and treatment, and spread the knowledge of prophylaxis, and made law apply to both sexes alike, the presence of venereal disease would become only a memory and the surgeon would lose a full half of his business.

We all shy at the word "compulsion" as applied to private conduct and whenever there is talk of compulsory vaccination, compulsory quarantine, or compulsory health laws of any kind, the cry is set up that it is un-American and yet no person in the community is so much under compulsion as the doctor.

The State tells the doctor to whom and under what conditions he may administer opium, cocaine, or other narcotic drugs, compels him to pay a fee for the privilege and hires spies to see that he obeys the law. It tells him how much alcohol he may prescribe and makes him report every case of contagious disease, no matter how private, and fines him or even takes away his right to practice if he fails to do so, and now has recently told him how much of his fee he must keep for himself and forbidden him giving any part of it to his needy brother practitioner, unless he first takes the patient into his confidences and gets his consent. Let me digress a moment and say a word about this

matter of split fees which has been so much in the public mind of late that the legislature thought it time to legislate it out of existence.

FEE SPLITTING.

Like all things human, the practice has been neither an unmixed good nor an unmixed evil. It is the outgrowth of economic pressure, whereby men striving to get business enough for a decent living, in competition with men already established, have been willing to accept a smaller fee for themselves and give the remainder to the men who had all the trouble of convincing the patient that he needed surgical care.

Such competition was ruinous to the best interests of the profession, because it introduced an element of commercial competition which tended to become unfair, and because whatever cheapens tends to deteriorate the value of everything to which it is applied, but, financially, the patient was not defrauded because he paid the same fee as was currently charged before.

On the other hand, he was usually distinctly benefitted by being persuaded to accept operation in time to get results, while the difficulty was recent and in the best shape for removal. In this way many persons received proper surgical attention in time to give them perfect recovery who, under the conditions formerly in vogue, might have been allowed to drift along with palliative treatment until too late for a good result.

Cupidity might tempt the man who expected to gain a fee just for referring a case, to urge his patient to operation unnecessarily, but without a division of fees the same man's cupidity would have made him hang on to his patient as long as possible until too late. The man who is dishonest will never be made honest by the law and I am glad to say I believe there are few dishonest men in our profession.

After much correspondence last winter I discovered that State Senator Hayes, of Indian Village, Detroit, introduced this bill into the Legislature and I have his letter assuring me that it was promoted by prominent members of the medical profession. I can hardly credit the idea that any prominent member of the medical profession has so little faith in the honesty and integrity of his profession that he believes it was necessary to compel its members to become honest by law. Much rather would I believe he had a much more personal motive and that he hoped to profit by putting a stop to a practice which was affecting his income. The law appears to follow closely the iron-clad rule promulgated by the American

College of Surgeons, which body is composed of men of such standing we cannot think they believe that the medical profession is dishonest. If the rule of the College and the law of the State have any excuse for their being it would be that they are aimed at the practice of hiring cappers or runners to promote business, a system originated and practiced by quacks, and the possibility that some few weaker and poorer young men entering medicine, seeing the glittering financial success of men following such methods, might be tempted to imitate them.

Although division of fees has lessened the returns to the surgeon from individual cases, there are many instances known to you all where the sum total of both income and fame have been very great for the surgeon whose practice was built by it. I know by observation and report how wide spread the practice has been in three of the larger cities of the State and believe it is also true of the others, and that many surgeons and physicians in the three cities have followed the system of divided fees. We hear much now-a-days of the value of group medicine and team work and this combination of the internist and the surgeon is team work in its simplest and crudest form, and as team work is intended to provide the patient with the best work at a price he can afford to pay, so this arrangement has usually worked to the same end.

I know many men in general practice who formerly did considerable surgery who now do none, thus helping to develop the surgeon's skill and experience, but if compelled to abandon fee splitting they will be compelled to resume their surgical practice and the quality of the work would for a time at least necessarily suffer.

Likewise young men inexperienced in surgery and men in smaller communities not equipped with hospitals and with limited surgical equipment, will be driven in self defense to commence doing their own operating.

I have practiced in the two periods, first the one in which the physician sent the patient to the surgeon with his blessing knowing that the surgeon would receive a fat fee while he received nothing, and if the patient lived the surgeon would get the honor of the cure, or if the patient died the doctor sending him would get the curses; or second, the split fee system where the internist makes the diagnosis, persuades the patient that surgery alone will cure him, leaves his business and accompanies him to the surgeon, often a long distance, stays by him until out of danger, visits him often if

within reach, and often cares for him through a tedious convalescence, for all of which the patient pays a sum usually agreed upon before hand.

The physician has all the responsibility, frequently much the most of the work, and often has paid the surgeon from his own funds in cash and carried for one, two or three years the trouble of collecting his pay, with the possibility of losing it all in the end.

The patient who gets relief cares nothing as to how the sum paid is divided, if he believes his physician is honest and if he does not believe him honest, deserves to be beaten if he employs such a man at all.

Understand me! I am not advocating fee splitting as an ideal system, but it is not the black crime it has been painted, and I resent the bald charge of dishonesty made by implication against our profession by the existing law. If directed against capping it was unnecessary for a much stronger and better law existed in Sec. 3 of the Medical Practice Act, Mich 1913.

Good attorneys have said they believed this law unconstitutional and in justice and honor to ourselves we should make every effort to have it repealed by the next Legislature.

Laws which are unjust make men liars and one of the most level-headed of the older physicians of this State has said "if the College of Surgeons really attempts to enforce the rule on which this law is modelled it will need to be re-named the Ananias Club."

With the institution of the selective draft the biggest investigation of the health of a class of the people ever undertaken in this country was accomplished and the results have been startling.

PUBLIC HEALTH.

Dealing with men at the age when you would expect the greatest physical fitness and highest average of health, and applying the standards used when it was required to recruit an army of only 80,000 out of a population of ninety million people, it was at once discovered that the standards would have to be lowered substantially, on the getting of an army of two million out of the draft of ten million would be impossible. This was done, but in spite of the much lower standards the rejections ran from twenty to almost fifty per cent, the highest being Pennsylvania with forty-six and seven tenths while the average for the whole country was 30.11 per cent. of rejects. Almost one-third of the ten million men were found unfit for the army and that means that most of that

number were more or less unfit to earn a living in civil life.

Bad teeth rejected a large number; incipient tuberculosis many more; diseased and irritable hearts, many hundreds; defective eyesight and suppurating ears still more. Probably a majority of the defects mentioned could have been prevented had the men been properly looked after in childhood and this is the most promising field to be cultivated in preventive medicine.

What was true of the health of these men was largely true, doubtless, in women of the corresponding age, so the fact remains that almost a third of the total population is crippled for lack of medical attention given at the proper time.

With such an appalling amount of preventable disease in the community what is the remedy? The first is the education of the public in the known causes of disease and much is being accomplished by the campaign of publicity carried on by the A. M. A., and the syndicated articles of men like Woods Hutchinson, Brady and Evans, the Public Health bulletin and the district and school nurses. Any one who has watched, as I have, the spread of interest in the subject of adenoids during the last twenty-five years, will appreciate the influence of such education, but there remains much to be done, particularly among the farming communities.

Better than half the population of this country are farmers and the draft showed a higher percentage of defects among them than in the cities.

The best remedy so far proposed is the division of the State into sanitary districts, with a full time health officer in each, whose function will be largely the carrying of sanitation and health instruction to the farms and villages. Besides looking after farm sanitation, which is notoriously bad, he can be more than busy addressing farm institutes, granges and farm gatherings on health subjects dealing with the prevention rather than the cure of disease.

The State should establish diagnostic clinics in every community of size where people could go for diagnosis and, if found in need of treatment, be referred to their family physician. Contagious diseases would be detected in their incipency and many epidemics prevented.

DOCTORS AND HOSPITALS.

Another lamentable fact disclosed by the draft and the Medical Reserve Corps was the quality of the medical training which existed in the ranks of active practitioners, of whom

several hundred were found totally unfit to fill the needs of the army, either because they had never known medicine adequately or because they had allowed their knowledge to rust for want of post graduate study.

The Medical profession is the one profession which requires that a man must have the facts at immediate command, in which when confronted by an emergency he will be able to apply his knowledge without recourse to his library where he may marshall the required facts at his leisure. He has to be "Johnny on the Spot," and often his lack of ability to do the right thing may mean a precious human life lost.

Every graduate in medicine should firmly resolve to get the post-graduate habit of study and the first dollar he can scrape from the price of his living he should devote to taking a week, if he can not take longer, at some medical center getting in touch with the growth in his chosen vocation. He should set aside the price of an up-to-the-minute medical book every month and then he should read it. The first years of his practice will be those of the most leisure and he ought to give one or two hours every day, at a set time, to his books and journals. Nothing gives the public confidence in the doctor like the knowledge that he keeps up to date.

Hospitals have not increased to keep pace with public needs particularly as the public learns how much easier sickness is cared for in a hospital than a private home. Not only should they be well equipped, but they should be standardized and be made training grounds for the nurses and practitioners required by the adjacent territory. A splendid way of doing this would be the plan proposed by Dean Vaughn, of Ann Arbor, which would make each new hospital erected in the State an extra mural extension of the University Hospital; that the standards of management and training be those of the University and each year a graduate of the medical school be sent as resident physician.

As fast as the older hospitals conform to the standards the same privilege would be extended to them. Outside the largest cities few of the existing hospitals have resident physicians and the advantages of the plan are obvious. The hospital would also become a center for post-graduate medical work where representatives of the staffs of both the medical colleges of Michigan could hold teaching clinics and bring to the medical men in each locality the latest research and the results of the advanced methods of treatment.

I would like to see the university, and particularly the medical department, occupy the same relation to the public as now obtains in Wisconsin, whereby the citizen who has a problem can call on the various experts at the University for assistance and receive expert advice without prohibitive charge.

For instance: If you were a manufacturer needing a knowledge of foreign markets or competing products, or you wanted the latest methods in chemical production, you could go to the university and have trained help in the solution of your particular problem. In like manner I want to see a much closer relation existing between the medical profession in Michigan and the University than has been the case in the past. Instead of being only the training ground for physicians, many of whom will be competitors of the men already established, and the hospital staff looked upon as actual competitors supported by the State, as unfortunately many of the profession have looked upon them as being, the University staff should, beside being teachers, be a group of experts serving as a clearing house for the medical problems of the profession.

You should be able to refer a patient to them for complete laboratory findings, and thorough examination, by men expert, each in his own field, and have him sent back with a full report on the case. I have been told this plan is already in force, but I feel sure it has not been well enough understood, and I feel the system needs advertising and pushing to become the useful thing it ought to be.

COMPULSORY HEALTH INSURANCE.

I now come to a subject which I look upon as the most important which will come before the medical profession for years; a matter which is likely to have the most profound impression on its standards, its economic relations, and if not properly met and directed is bound to bring discord and disaster to our profession. I refer to the proposed law which has been introduced in the Legislature of nine states, though as yet passed by none, has been voted on by referendum in California, narrowly escaped being passed when it came the third time before the New York Legislature and is again being fought out in that state. It is the Compulsory Health Insurance Law for workingmen. First introduced by Bismarck as a means to combat the rising tide of Socialism in Germany, it has been adopted in most of the European countries and England. Although intended by its author as an anti-socialist weapon it failed, as the constantly growing number of Socialists showed,

and it has been taken over by them and is being actively pushed as part of their own propaganda.

By the proposed model law, as introduced in New York State, all employes except Christian Scientists and similar cults, will be forced to insure themselves against sickness. The cost of the insurance is to be paid, one-half by the workman and the other half by the employer. In case of men earning less than \$9.00 and more than \$5.00, the employer pays three-quarters; if earning less than \$5.00 a week, the employer pays all.

This will entitle the man, when sick, to free medical attendance with all medicine and appliances that naturally go with it; motherhood benefit for his wife, and two-thirds of his wages to a maximum of \$8.00 a week.

The details of this law, with the arguments both for and against, will be presented to you tomorrow by the other speakers and I will call your attention to the position the physician will stand in relation to it.

The physicians who will attend the beneficiaries under the law will be hired by an industrial commission composed of laymen presumably political appointees.

Their salaries will be fixed by the medical referee, himself a political appointee, not allowed to practice among the insured men, after recommendations as to the fees have been made by the county medical societies; but nowhere in the law is he directed to accept the recommendations and he will, being independent of the profession, naturally follow the rule in all public practice and let the work to the lowest bidder. We can estimate what the rate will be by examining the action of the law in England where it has been tried under nearest conditions to our own.

Last winter Dr. Cox, Secretary of the Medical Section of the British Medical Association, wrote me that the amount paid for each man insured was \$1.87 per year and that the average of calls made for that sum was 3.8, which is at the rate of 49 cents per call. When you know that the men practicing under the panel system were quite commonly paid a shilling per call before the law was in force, you will understand his thinking that on the whole the physicians in the panel are better satisfied with their practice since it came into effect.

Under the great increase in the cost of living due to the war, they are not able to meet expenses and are agitating to have the rates doubled, with a partial promise by the Government that it will be done, in which case they average 98 cents a call. If we allow the doctor

in this favored land to be paid double the fee of his English brother, he will have less than two dollars a call and I would like to know how many of my auditors are anxious to work for the State at the rate of \$1.96 per call, night work and obstetrics included!

Any one familiar with the practical workings of contract practice in this country as shown in Lodge, woodsmen's and coal miner's associations, well knows how detrimental it is to the scientific standards and attainments of the men who continue to follow it. What, then, is to be your attitude towards a State contract practice which will include a majority of the men in the profession?

Because the bill is not yet before our Legislature you may say I have set up a man of straw to throw stones at and am borrowing trouble where danger does not exist. I assure you the prospect of having to face this problem is far from a remote one! This proposed law is part of the great social wave which is sweeping the whole world and this phase of it is being pushed by a very powerful organization, the American Association for Labor Legislation, with the avowed purpose of making it ultimately nation wide.

Who constitute our association for labor legislation? Its president is Samuel McCune Lindsay, of Columbia University. Among its vice presidents are Jane Addams and Woodrow Wilson; on its executive committee are many persons of great wealth and I am told it is financed largely by the Sage Foundation. People with these resources and purposes are not going to quit easily and, although the law failed to pass in eight States, and three times in New York, it is now again the fourth time before the Legislature of that State. As soon as it is passed you must know your own minds regarding it and be prepared, or you are liable to have something forced upon you which will be far from what you desire, when it will be too late to shape and direct it for your and the public good.

Without the aid of the medical profession it cannot exist nor thrive without the hearty co-operation of us all. If we are persuaded that the workingman is suffering illness in greater proportion than the balance of the community; if we believe such illness is due to causes which can be remedied and place the workman on the same plane of health as the balance of the community; if we concede that no better way of correcting such injustice can be found, or that its correction in this way will not cause greater harm to an equal number of persons in other

ways, then the practice and traditions of our profession will compel us to accept and work for it whole-heartedly, regardless of the inconvenience it may be to ourselves, or the added labor it may thrust upon us.

With the certainty that this law will come before our Legislature for passage, and the strong possibility of its passage, unless the Legislators are convinced that it is an economic fallacy, of prohibitive cost to the public and useless in accomplishing the good it is intended to bring about, what is to be your attitude? Will you be the passive recipients of whatever the professional politicians choose to hand you?

ORGANIZATION.

If the medical profession had been awake to the public needs, and united as now, we should have had an adequate medical practice act years before we did. The Pseudo-medical cults would not have been granted legal recognition, licensing boards and the right to practice medicine under false pretense, as they now do. When the workmen's compensation law was passed there would have been no limit to the time for which the patient needing care would have received it, and no attempt would have been made to fix a beggarly fee bill to control the price the doctor would be paid, but the current fee in his locality would have been accepted as the rule without question. The time to see the politician is when he is wanting a place for himself, and not wait until he is firmly seated, before showing him where he should stand towards the doctor and proper medical bills for the benefit of the public health. Don't wait until he is in the saddle, for when you see a vicious bill before the Legislature it will be too late to win him to your cause. He is apt to hide behind the smoke screen of "class legislation" and tell you to go to.

The attitude of the average Legislator is well shown in the extract from a letter of Dr. O'Reilly, of Brooklyn, who quotes a New York Senator as follows: "Doctor, you are the dearest beings on earth and we love every hair on your heads—personally, but as a class you are pitiable. You spend your time, money and energy in sustaining scientific societies for the advancement of science and the good of your fellow man and you don't know the first thing about self-preservation. You are wasting your time in Albany. Go home and organize and come back next year and we will have to listen to you." Dr. O'Reilly heeded the advice with the result that a very powerful guild of medical, dental and pharmaceutical societies is at work

on the problems in New York and the Legislature is now listening hard.

For these reasons the Medical profession must unite more closely and be alert and watchful when medical legislation is proposed to see that its interests are not sacrificed to the commercial competitive idea which would treat skilled service as in the same class as cement and gravel to be bought from the lowest bidder. In the past when legislation affecting the doctor has been proposed we have either stood back and allowed it to go by default or else have divided into hostile camps whose squabbles disgusted the Legislator and resulted in his ignoring us entirely. It will not suffice to merely put ourselves in opposition to the passage of this bill, but we must see that constructive laws which correct the evils complained of are introduced, preferably by laymen for laymen leaving the doctors out entirely. If insurance is to be forced on the workman, let it be paid as cash with which he can employ the doctor of his choice, not as pauperized service by panel doctors coerced into giving indifferent work by poor pay, thus robbing both the doctor and the patient of his self respect and his just due.

We already possess a splendid organization which will soon include practically all the reputable practitioners in the State.

If we put this mass in motion in the right direction nothing can withstand its momentum.

Let us who know the route, show the way for the public to better its health conditions by health education and general sanitation; not in the piecemeal fashion of compulsory insurance applied to only a fraction of the people. If we must have compulsion let it be compulsory sanitation, which applies to everybody, which will raise the level of health for all the people until none but the unpreventable disease will be their portion.

The medical profession has long been known as the only one on earth whose members are regularly and systematically doing everything possible to cut down their income. We have stood back of and worked for everything which promised to lessen disease without ever stopping to consider how our income was affected and will doubtless do the same to the end of the chapter.

In calling attention to the many ways in which the State has interested itself in medical matters I have sought to show tendencies which are of vital interest both to the general public and to the medical profession, and it will be wise whenever one of these activities is proposed, to examine it with regard to its effects

on the profession. Whatever will lower the economic status of the doctor will lower his professional standing and attainments and lessen the value of his services to the public. On the other hand, whatever promotes his welfare will at the same time secure to the public better qualified men who will render better services and the public be benefited accordingly.

The doctor might prefer to spend his whole time in altruistic pursuits, but he is obliged to devote the most of it to earning a living so he should be allowed a choice as to how he does it: whether as a self-respecting, independent unit or herded into a dead level mob as a hireling of the State.

To show the contrast between the doctor as he is and the doctor as he was and because he belonged to a vanishing race, I will place before you a picture from a master hand of a doctor of the old school.

"No one sent for the doctor by the grace of his appearance, or the advantage of a good bedside manner. A tall, gaunt, loosely made man, without an ounce of superfluous flesh on his body, his face burnt to a dark brick color by constant exposure to the weather; red hair, and beard turning grey, honest blue eyes that look you ever in the face, huge hands with wrist bones like the shank of a ham and a voice that hurled his salutations across two fields, he suggested the moor rather than the drawing room.

"But what a clever hand it was in an operation, as delicate as a woman's and what a kindly voice it was in the humble room where the shepherd's wife was weeping by her man's bedside.

"We liked best to see him on his old white mare who died the week after her master. It was not that he rode beautifully, for he broke every canon of art, flying with his arms, stooping till he seemed whispering into Jess's ears, and rising in the saddle beyond all necessity. But he could ride faster, stay longer in the saddle, and had a firmer grip with his knees than any man I ever met and it was all for mercy's sake.

"Before and behind his saddle were strapped the instruments and medicines the doctor might need, for he never knew what was before him.

"There were no specialists in Drumtochty, so this man had to do everything as best he could and as quickly. He was chest doctor and doctor for every other organ as well; he was accoucheur and surgeon; he was oculist and aurist; he was dentist and chloroformist, beside being chemist and druggist.

"He aye can tell what's wrang wi' a body

and maistly he can pit you richt, and there's no new fangled wys wi' him; a blister for the outside and epsom salts for the inside, is his work.

"If we're tae dee we're ae dee and if we're tae live we're tae live but I'll say this for the doctor, that whether we're tae live or tae dee he can aye keep up a shairp moisture on the skin."

He collected his fees once a year on market day and if the service came to two pounds he would insist on thirty instead of forty shillings. At the most it is likely his income never exceeded 120 pounds for the year, which may be one reason why he never married.

He was a chestnut burr of a man on the outside, but with a heart tender as the touch of an infant's hand. He was too busy helping his fellow creatures to find time to practice the forms of religion, but when he passed away the elegy selected for him by the hardest bitted theologian of them all was "Come, ye blessed of my Father, I was sick and ye ministered unto me."

ADDRESS BY HUBERT WORK, M.D., PRESIDENT-ELECT OF THE AMERICAN MEDICAL ASSOCIATION.*

Mr. President, and Members of the Michigan State Medical Society:

The tendency to review the past is a characteristic of advancing years, and I am tempted by it, for my first knowledge of medicine was gathered in your great University. But the past has taught its wisdom, we cannot retrieve its errors and should look forward.

The quarter of a century last past has seen medicine take its rightful place among the sciences. Men schooled in previous years, who have failed to unfold with the new science, are now tradesmen, working with cumbrous tools, with fragmentary materials, for a livelihood.

They are missing the pleasures of pursuit and the stimulus of achievement. The imagination of the pathfinder and the consciousness of being the first to discover a new fact to add to the sum of human knowledge is not for such men.

Human anatomy and physiology are the same as two thousand years ago, but all that remains to us now, of the practice of medicine then, is suggestion, elaborated into a confused cult and called the Science of Christ.

Medicine has not advanced far, if measured by periods of one thousand years. Nothing

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founded wholly on empiricisms can, because most of that learned must be forgotten and new theories formulated, to be in turn abandoned, until perchance a fundamental scientific principle is recognized, which in turn suggests another found to harmonize with the first, both survive because each is true and a new science is born.

The discovery of the circulation of the blood has led to everything that is known about human health and disease. Yet the truth gleaned from a field of research, too large for the human imagination to envision, has been reduced to printed pages and is within the reach of the young man in medicine today.

He can get within a few years the established scientific knowledge of the masters in medicine for a century past. I do not mean that all we read now in medicine is knowledge. Some of it is conjecture, but even that is based on science although erroneously deduced, yet all of it is information until we appropriate it and prove it. Then it becomes knowledge contributing to the wisdom of individuals.

The history of scientific American medicine from this day forward will be made by young men, written by older men and compiled from the transactions of medical organizations similar to this one.

The first essential to civilization is young men, for the physical protection of a nation. The development of the young men necessary to protect the nation's autonomy is impossible without correct breeding and feeding rules. But, given perfect types of soldiers our armies would perish from disease of contact if deprived of our knowledge of medicine and our young physicians to apply it. Wars are won by young men at the front, gathered alike from great centers of population and country places, grouped into a great military organization. The art and science of medicine must be carried forward by groups of young men in the country and state societies, through the National Association.

The banquet witticism of the wonderful Osler, taken seriously and given worldwide publicity by the lay press, was literally true this far; that the physician who has not laid his foundation before forty years cannot do it afterwards. It is the plain duty of those older in medicine to advance the younger men, through opportunity and encouragement. Ours is a profession and not a trade that precludes apprentices. In these young men, with the newer education, the more scientific premise and direction of thought, lies the protection of our whole medical fabric,

including the routinist, the ageing and the once successful who have reached their saturation point.

As communities age, the lime that has been taken from the soil and deposited in men's arteries may be substituted, to the soil, but new men must be found for replacements.

The promises of medicine are so alluring that the regrets of one who can only look backward, are softened with the pleasure of his visions for those ready to go forward.

Physicians now anticipate danger to vital organs from micro-organisms and destroy them. We make the human body immune to many incurable diseases. We divert nerves to paralyzed muscles and restore function. We make jaws from ribs, resect and refashion the abdominal contents at will, although we were warned forty years ago, never to open the abdominal cavity. With the Roentgen Ray we can see what the human organs are doing at the moment. Similar possibilities in medicine are innumerable.

But one man cannot do all of these things, and others cannot know of them except as we are organized into societies to get them before other minds. Immediately we have served our apprenticeship in one of the good medical schools, we are graded and scattered. Very soon to learn that we are not qualified to repair all damaged and defective parts of the human machine we had been studying. Then we become piece workers, are called specialists and begin to neglect a study of the human economy as a whole. It is at this point that local organization of physicians into clubs, academies or pathological societies becomes imperative, lest we forget that man is evolved and not assembled.

Instantly a new medical thought is proven by a physician it is no longer his but becomes the property of his profession. There are no "letters patent" among doctors. They work under a single order; a command to "obviate the tendency to death."

We have learned that it is quicker, cheaper and easier to prevent disease than to aid in its cure. The economic saving in dollars to the people as individuals and to the industries of the United States in the aggregate, through the applied knowledge of doctors, is greater than the annual costs of the government of the United States. Our medical colleges have been reduced one-half in numbers and our medical graduates proportionately, in the past fourteen years. Yet, so many diseases are prevented, our young physicians are so much better trained to shorten the duration of disease and their time

conserved by the car, that the public is as promptly served as before.

Organization is the symbol of every human success. An individual must organize his plans, his habits, and his time—himself in short—in order to accomplish. The family, the school district, the county, state and nation are held together by organized government, but the medical profession is so loosely joined in many communities that its lack of cohesion is an inherent weakness which delays progress.

Trades unions meet weekly and fine absent members, their only objects being higher wages, less work, quick payment, and approved employers.

Physicians meet infrequently (if at all), tentatively discuss a fee bill every few years and work for any one at any hour with or without compensation.

The county medical society is the foundation stone of the practice of modern medicine. It was this institution that through contact and association began to soften the personal antagonisms once thought to be a necessary part of competing doctors' equipment.

The county society first suggested the possibility of friendly assistance from competitors, in emergency. Consultations grew out of the county society and while these home organizations are loosely knit and in many places inefficient, it is because they cannot be continuous and interest wanes between infrequent meetings. Nevertheless, future success of the individual practitioner will be measured by his working interest in his county society, because it is his nearest opportunity to expand his professional vision.

The State Medical Society is a representative convention of county societies. It is assumed that the best men from each county society attend it, because their presence indicates interest, which is essential to progress.

Those who participate in state societies; in its politics, with prepared papers, and in discussions, are, or soon become, known as their profession's leaders in the state.

Politics is the breath of life to a state medical society. Officers who are elected without a struggle from their friends will neither appreciate the honor nor work for the society. Politics in medicine must be guided solely by patriotism for the society's interests. Earnest working members should hold the offices rather than those whose claims are advanced age or the negative virtue of no declared antagonisms. The perpetuation in office of social cliques is

vicious and not medical politics in its truest sense.

Both county and state medical societies are invaluable from a social viewpoint quite exclusive of their technical features but no paper was ever read to medical men without someone learning something to use or to avoid.

The American Medical Association is a composite picture of the county medical societies of the United States; blended through the screens of their respective state societies. County societies select delegates to the state society which in turn elects the state's representatives in the house of delegates of the National Association.

One hundred twenty-five members of county medical societies constitute the house of delegates, make the laws, elect the officers and control the scientific output of the most advanced, independent and virile body of medical men in the world.

That house of delegates is the American Medical Association, in concrete. It is uncompromising, direct of thought, alert and intellectually honest. It has indirect moral obligations to the physical welfare of this nation that its members probably never considered. Yet their habit of thought which automatically puts to them the question "What is right" but never the question "What is expedient" sets this house of delegates apart from all other deliberative bodies of men and unconsciously directs them. Members of county societies who do not attend the scientific sections of the National organization, miss an annual opportunity for postgraduate instruction no other country can give, and those who fail to read its *Journal* are depriving themselves of a liberal medical education.

Perhaps some of you may not know that your American Medical Association had a membership twenty-one years ago of less than eight thousand physicians and that it now numbers more than eighty-three thousand members. That the circulation of its *Journal* when the present editor took charge of it was less than eight thousand and that its last issue exceeded eighty-one thousand copies.

Sixteen hundred tons of white paper are necessary to print the *Journal* each year and the buildings owned by the Association, necessary to house its presses and approximately three-hundred employees, has a present day value of one million of dollars.

The American Medical Association belongs to and is operated by and for the ethical physicians of the United States.

It will be what they choose to make it through their direct representatives who meet annually. See to it that your best men represent you as delegates in its house, for that body is under its constitution and by-laws, responsible to the medical profession for the American Medical Association.

With its ideals, its Journal and equipment, the American Medical Association is a monument to the medical mind of the physicians of the United States. To their altruism, their faithfulness of purpose and their loyalty to human service.

WHAT SHOULD BE THE ATTITUDE OF PHYSICIANS TOWARD HEALTH INSURANCE.*

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When one first takes up the study of so-called health insurance, he is confronted with an amount of evidence that is bewildering. The reports of the state commissions alone constitute a formidable mass of material. The index for current medical literature published by the American Medical Association shows that since January 1, 1913, there have appeared in medical journals alone over 350 articles on this question. The literature on the subject in foreign countries is even larger. Masses of actuarial and statistical reports, and innumerable pages of partisan controversy only add to the enormous mass of material from which writers on both sides of the question have drawn arguments and selected figures to sustain them, so that the reader is bewildered by contradictory statistics drawn from equally reliable sources. To add to the confusion each group has viewed the subject largely from its own point of view and has discussed it almost entirely from the standpoint of its own interests. This is particularly true of physicians who have limited their discussions exclusively to the medical features of the plan and those which affect physicians, overlooking the fact that social insurance is essentially an economic and not a medical question, that the provisions affecting physicians are secondary details as far as the proposition itself is concerned, no matter how important they may be to us as physicians, and that to limit the discussion of the question by physicians to the medical features of the plan is

equivalent to conceding the claims of its proponents in its social and economic features. Medical care and attendance are necessities of the plan, only in case such a plan is adopted. Naturally, if social insurance is not accepted, there is no necessity for medical attendance. A discussion of the details of medical services bears the same relation to the plan in general that a discussion of the interior decoration of a house would bear to the question of the erection of a house itself. If no house is built, no decorations are needed. Until a man decides whether or not he will build a house, he naturally does not consider how he is going to decorate it. The chief criticism which can be made on the attitude of the medical profession on this subject so far is that we have allowed ourselves to be diverted into a discussion of secondary questions and to have our attention distracted from the main and fundamental questions at issue.

HISTORY OF THE PLAN.

Let us first consider briefly the history of the proposed plan. Compulsory state industrial insurance, social or health insurance as it is variously called, originated in Germany in 1883. Responsibility for it is generally attributed to Bismarck, at that time the Chancellor of the German Empire which he had created in 1872. Laws providing for different forms of state regulation, partial or complete, compulsory or voluntary, have in the last thirty-five years been adopted in various European countries. An enumeration of these is unnecessary. Disputants on this question are not even able to agree on its history and present status, the advocates of social insurance claiming that "universal health insurance is established in not fewer than ten of the leading continental countries of Europe" and the opponents claiming that this statement is a "gross exaggeration." Apparently the advocates of the plan are claiming everything that they choose to call social insurance and the opponents are refusing to recognize anything that does not conform to their own definition.

The historical question is of little importance to us. If a need for social insurance in this country can be shown, then the action of other nations is immaterial. Unless its need in this country can be demonstrated conclusively, it would be no argument in its favor to show that every other nation on earth had adopted it. Aside from the main question at issue, however, we can learn something from the experience of the medical profession in England.

When Lloyd George was preparing his social

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insurance bill in 1910, he consulted the representatives of the labor unions, the individual employers, the national industrial corporations, the friendly societies (the analog in England of our fraternal and benevolent associations), social workers, the philanthropists and the politicians, every one, in short, except physicians, whose services were indispensable in carrying out this measure. Apparently it never occurred to him to secure their advice or criticisms. Physicians failed to realize the significance of the proposed plan and the tremendous effect which it would have on the profession. This curious situation was probably due to the fact that for years the British medical profession had held itself aloof from the public and had had little, if any, influence on the framing of legislation on public health or social topics. It was frequently not until the bill had been drafted, introduced in Parliament and advanced to the second reading that the physicians of England woke up to a realization of the situation. Unfortunately, instead of opposing the measure on social and economic grounds, they devoted themselves almost entirely to those provisions of the bill which affected physicians and which provided for the compensation of doctors and the relations between the physicians and patients. This attitude naturally created the impression in the public mind that physicians as a class had no economic objections to the measure and that their only interest was in seeing that they secured as high a rate of compensation as possible for their services. As a result of this limited and essentially trade union attitude toward the measure the medical profession of England had little, if any influence in molding the main provisions of the bill and were obliged eventually to accept the terms offered them.

In this country, the subject was first taken up by the American Association for Labor Legislation, a voluntary body with headquarters in New York and with about 3,000 members distributed through the different states. This Association had previously been active in urging the passage of several laws, notably workmen's compensation laws which have been adopted in forty-two states. In December, 1912, it organized its social insurance committee, which in 1914 prepared a tentative draft of a health insurance act, which in 1916 was introduced in the legislatures of Massachusetts, New York and New Jersey. In 1917, the bill was introduced into twelve state legislatures. None of these fifteen states adopted the bill. Eight of them: California, Massachusetts, New Jersey, Con-

necticut, Illinois, Ohio, Pennsylvania and Wisconsin, appointed commissions to investigate the subject. In Massachusetts and California, two successive commissions were appointed, making in all ten official bodies which have made surveys, collected evidence, held hearings and issued reports on this question. In New York a reconstruction commission, appointed by the Governor, also considered this subject. Of these, in Massachusetts, the first commission reported in favor of compulsory health insurance and the second commission reported adversely. In California both commissions reported in favor of the plan but on a referendum to amend the state constitution so as to permit of the establishment of compulsory state health insurance, it was defeated by a vote of 358,324 to 133,858. In New Jersey and Ohio, the commissions reported favorably. In Connecticut, Wisconsin and Illinois, the majority of the commissions reported against it. In Pennsylvania, the commission recommended further study and investigation. In New York, the Governor's commission naturally reported favorably.

THE PLAN.

So much for the history of the movement in this country. Let us now ask what is this proposed plan, stated in its simplest terms. The standard bill drafted by the American Association for Labor Legislation can reasonably be taken as an authoritative statement of the proposed scheme. It provides that all employes earning less than a given amount shall be entitled to medical, surgical, hospital and nursing care, dental treatment, maternity benefits, cash benefits and funeral allowances. These services are to be paid for out of a fund of which the state furnishes one-fifth. Two-fifths are to be contributed by the employe in the form of compulsory payments of a certain percentage of his wages, variously estimated at from three to seven and one-half per cent., and the remaining two-fifths are contributed by the employer in the form of compulsory payments of about the same percentage of his payroll. This fund is to be administered by a local board for each group of 5,000 employes, to be composed of an equal number of representatives of employers and employes, all the local boards to be under a state commission which will determine the conditions of medical treatment, terms of compensation to physicians, etc.

Regarding the details which vary in different bills, but which do not change the principles involved, the maximum annual income as fixed by the British law was approximately \$800.00 a year. That is, only employed persons whose

gross annual income was \$800.00 or less came under the compulsory provisions of the law. This has since been raised to \$1,200.00. In the model bill drafted by the American Association for Labor Legislation, the maximum amount is \$100.00 a month. In the Donohue-Davenport bill in New York, no limit was specified. The proportionate amounts to be contributed by each employe is fixed by a sliding scale in accordance with which the amount contributed by the employe decreased and that contributed by the employer increased as the weekly earnings decreased in account. In the case of employes receiving less than \$5.00 a week, the employe pays nothing, the employer paying 80 per cent. and the state 20 per cent. Details regarding medical services also differ. Medical and surgical attendance is provided either by the appointment of certain physicians as whole time insurance physicians, or by the creation of a panel or list of physicians in each district willing to care for those insured. Proposals for the compensation of physicians also differ. The payment to each physician of a fixed salary, an annual pro rata division among all the physicians on the panel of the amount appropriated for medical and surgical services for the district or a capitation system by which each physician is paid in accordance with the number of persons treated or the amount of work done during the year, are among the plans proposed.

Such is the plan in its briefest terms. Endless discussion has taken place regarding details, with the result that the fundamental features have become obscured and lost sight of. What are the arguments made in favor of it?

The brief on the model bill prepared by the American Association for Labor Legislation claims that there is at present a disproportionately large amount of sickness among employed persons causing immediate loss of time and wages and resulting eventually in incapacity and poverty; that there are as nearly as can be estimated 3,000,000 persons in the United States sick at any one time; that each of the 30,000,000 wage earners loses approximately nine days a year through illness; that the resultant annual wage loss amounts to half a billion dollars; that the wages paid American working men are inadequate to enable them to meet the expense of sickness and to bear the losses consequent on sickness and incapacity; and that it is therefore necessary to distribute this burden among three parties; viz., the employe, the employer and the state. The objects

of the proposed plan are, therefore, primarily two: viz., to reduce to a minimum the amount of time lost by workmen through sickness and to divide between the state and the employer 60 per cent. of the cost of the illness of employes, leaving 40 per cent. for them to carry as their share.

EVIDENCE PRESENTED

It is impossible to discuss in detail the evidence presented by the advocates of social insurance in support of their proposition. It can only be pointed out here that all of the statements made above rest on estimates or opinions and not on facts. There are no figures in existence showing the number of deaths in the United States from different causes, the death rate in the United States among different social and industrial classes, the amount of sickness in the United States for any given period or class, the average income of workmen in the United States or the average amount of time lost by workmen through illness. Statements on these points are based on estimates made to prove widely different claims on both sides of the question. These estimates are compiled in various ways. Some are based on studies of small groups, the general conclusions drawn from these small groups then expanded and applied at proportional rates to the entire population. Another favorite form of manufacturing statistics in this field is to assume that the mortality and morbidity rates, average annual incomes and average losses through sickness in one country or at one time can be applied without modification to another country at a different period. Such methods are clearly fallacious and untrustworthy. Statistics collected in Frankfort or Schleswig Holstein in 1882 are of no value in New York, Ohio or Illinois in 1920. Intensive study of a comparatively small group of families in the tenement house district of Chicago can hardly be accepted as representative of the entire population of the state. Conditions found in an old, densely settled manufacturing state like Massachusetts are of no value in discussing problems in comparatively young farming states like Kansas and Nebraska. Careful examination of the material produced as evidence shows that there are no available data on which to base general statements on this question. The only way in which satisfactory or convincing evidence on these problems can be secured is by a comprehensive and exhaustive state-wide survey of the state in which the proposed plan is under discussion, made not with a view to securing evidence to support a preconceived theory, but to secure the

facts as a basis for whatever constructive action may be necessary. Too often the advocate of any plan regards all statistics in favor of his proposition as conclusive and all evidence against the plan as unsatisfactory. One of the leading advocates of social insurance in a recent summary of the findings of the official health insurance commissions states that of the eleven official reports, four, viz., California, Ohio, Pennsylvania and Illinois, "represent thorough going studies of the problems of health insurance" and that the investigation made by the Illinois Commission was "probably the most thorough going of all," yet this investigation only covered forty-one blocks in Chicago, containing approximately 3,000 families, of which only 9 per cent. are reported as having deficient incomes; while the report itself immediately after recommending compulsory health insurance says, "The findings of this section are not presented as absolutely conclusive and final. They must be weighed in the light of the necessary limitations of the hypothetical application of assumed standards to an actual situation considered as unaffected by their introduction. The evidence presented is largely circumstantial and presumptive and should be accepted with due reservation for this fact." If this is the view which the investigator had of the value of his own investigation, it is not strange that it failed to convince the Illinois Commission. Yet this report is put forward by the advocates of social insurance as "the most thorough going of all."

Great importance is also attached to the reports of the California Commission. The report of the Second Commission is largely confined to a discussion of methods and standards assuming without warrant that the underlying principles are proven. The first report, however, discusses the fundamental questions involved. While the general conclusions as stated are sweeping, the body of the report itself affords no basis for such conclusions. In fact, the commission repeatedly acknowledges its inability to secure any reliable information. The report says, "There is practically no scientific information bearing on this important question of unemployment." The attempt on the part of the Commission to discover the average number of weeks of employment secured by the workers in the leading trades in San Francisco proved a failure from the standpoint of accurate statistics. The economic loss to the community resulting from the great knowledge of working days wasted through sickness can merely be guessed at. The Pennsylvania Commis-

sion, consisting of three members from each house and three appointed by the Governor, delegated practically all of the work to two women who were limited in time to three months and in money to \$5,000.00. The material contained in this report is almost entirely compiled from other sources and contains but little original data, while the investigation is far too superficial and incomplete to justify placing a new, untried and highly expensive burden on the state.

A careful study of the evidence presented in favor of health insurance and its relation to the assumptions drawn therefrom by the advocates of the plan would be extremely interesting if time permitted. It can only be said here that the evidence as contained in the official reports is not "overwhelming," neither does it clearly indicate the need for social insurance as claimed by its advocates. On the contrary, the evidence is fragmentary, incomplete and unconvincing and many of the conclusions drawn are by no means justified by the evidence.

WHAT THE PLAN OMITTS.

Let us now examine the plan itself to determine definitely just what it is and what it is not.

1. In the first place, it is not insurance. The essential principle of insurance is the distribution of loss from any cause among a large number of persons *subject to the same risk*, so that the cost of the loss to any one will fall proportionately on all. For instance, 100,000 men owning houses, all of which have practically the same liability to destruction or injury by fire, either by mutual agreement or by taking out policies under a corporation, prorate among the entire number exposed to the same risk any losses that may arise to any one of the number, so that the loss of each one is distributed among the entire group rather than borne by the individual. This is insurance. But if outside parties, not subject to the risk, assumed a part or all of the loss, it ceases to be insurance and becomes a subsidy. The proposed plan is not insurance since it does not distribute the loss among those exposed to the same risk but brings in two parties in no way sharers of the risk, viz., the employer and the state. If any one proposed a plan to divide the cost of loss and damages to automobiles among the owners of the machines, the automobile manufacturers and the state, it would be hard to convince anyone that such a scheme was insurance. If the proposed plan provided for distribution of the entire cost of illness of employes among themselves, either mutually or through a supervising

corporation or the state, then it would be insurance. As it is, it is simply a method of taxing all the citizens of the state, either directly or indirectly, to furnish medical and surgical services to maintain the productive efficiency of the population. All the cost will ultimately come on the consumer and the citizen. Neither the employe or the employer, as such, will bear any part of the expense. What would happen if such a plan were adopted in any state? The workman finding that a certain amount was deducted from his wages each week, would immediately demand that his wages be increased enough to make good this deficit. This increased wage would be added to the operating expenses of the plant. The employer could hardly be expected to pay his assessment out of his profits. He would add his share to the operating expense account. So that the cost of production and finally the cost of the product to the consumer would be increased by the addition of whatever amount both the employes and the employers were compelled to pay and would ultimately be paid by the people, as an indirect tax as a part of the price of the commodity. The one-fifth contributed by the state could only be paid out of the state treasury through money secured by taxation of its citizens. The proposed plan, therefore, is not insurance at all, but is simply a plan for providing medical, surgical and hospital care in order to increase the industrial output of a portion of the population at the expense of the entire citizen body, through direct and indirect taxation.

In the second place, the proposed plan is not *health* insurance. It is a plan whereby the amount of time lost by employes through illness may be reduced to a minimum and the productive efficiency of each employe may be maintained at the maximum. The object is not the maintenance of health but the maintenance of productive efficiency. The plan proposed is neither a medical nor a public health proposition; it is purely an economic measure, intended to maintain the efficiency of the employe and the productiveness of the industrial plant at the highest possible point. The health features of it are secondary and incidental. The term, health insurance, therefore, is a misnomer. Instead of being called health or social insurance, it should be called taxation for the increase of industrial production.

In the third place, contrary to popular opinion the proposed plan is not intended for the relief of poverty and unemployment. In England, which has probably the most elaborate system of poor relief laws of any country, the

operation of the Poor laws has not been altered by the adoption of social insurance. The proposed plan only cares for those who are employed and who are drawing wages. Those unemployed at the time such a law would go into effect and those incapable of supporting themselves are in no way provided for under such a plan and must be cared for through voluntary philanthropy or by state charitable institutions as at present.

In the fourth place, it is unsuited to social, economic and political conditions in this country. It is undemocratic in that it divides the American people into two classes; viz., those who work and those who do not work. In European countries, classes are fixed and stationary. A man is born into a certain class and remains in it throughout life, practically without change. If he is born into a wage earning family, he becomes a wage earner and remains so throughout life. In this country we have no such class distinctions. The employe of today is the employer of tomorrow and the member of the leisure class of the day after. He is not only able and willing, but eager to bear his own responsibilities, to assume the burden of his own mistakes and misfortunes and to reap the result of his own enterprise and energy.

IS THE MOVEMENT INEVITABLE?

Two statements which have been repeatedly made regarding the proposed plan deserve specific mention at this point. The first is that health insurance is inevitable. This statement has been made repeatedly by the advocates of social insurance until it has come to be accepted even by doctors as axiomatic. Yet there is not the slightest basis for such a statement. So far as I am able to ascertain, it was originally made by Mr. Lee K. Frankel, Third Vice-President of the Metropolitan Life Insurance Company, at, I think, a conference held in Columbus, Ohio, early in the discussion of the question in this country. Mr. Frankel in the course of his remarks said that health insurance was coming sooner or later. This statement was simply an expression of Mr. Frankel's personal opinion. It was, however, immediately taken up and circulated as a statement of the inevitability of health insurance. There is no justification for this assumption. Legally and constitutionally, the adoption of such a plan is a matter for state action and it can only be adopted if a majority of the people of the state or a majority of the members of the legislature of the state vote in favor of it. It is no more inevitable than is the adoption of any other proposed measure.

Another statement is that social insurance is the legitimate successor of workmen's compensation and that as laws on this subject have now been adopted by most of the states the adoption of a social insurance bill in each one of these is logically the next step. This statement shows a lack of discrimination regarding the underlying principles of the two propositions. Workmen's compensation laws are based on the general principle that an industry should bear all the expenses incident to carrying it on and that injury or impairment of the efficiency of employes is just as legitimate a charge on the industry as is the wear and tear on the machinery. Workmen's compensation laws simply substitute statutory enactment for common law and judicial decision and a definite plan of adjustment for the individual action of a jury in each case. The two propositions have nothing in common.

FOUR PROPOSITIONS.

Accepting the proposed plan for the sake of the argument, however, and waiving these objections for the time being, when the plan is carefully analyzed and all the non-essential features eliminated, it is seen to rest on four propositions, all of which must be proven in order to establish a case. The claims of the advocates of this scheme are:

1. There is a disproportionate amount of sickness among employed persons causing financial loss, incapacity and poverty greater in proportion than that sustained by the average person and requiring special methods of relief. Until this is proven, there is no justification for adopting special laws for employes.
2. The financial burden caused by sickness is heavier than the average employe is able to bear. Until this is proven, there is no reason to assume that he cannot carry his own burden.
3. Present methods of promoting public health and controlling disease are not adequate. Until this is proven, there is no need of devising any new plan.
4. Compulsory state supervised sickness insurance is the best remedy for this condition. Until this is proven, it is possible that some other remedy may be better.

ADVOCATES MUST PROVE THEIR CASE.

As soon as the case is stated in this categorical form, it is at once seen that the burden of proving these four propositions lies with the advocates of social insurance. No one of the four propositions involved has been proved. Neither is there at present any conclusive evidence or any mass of statistics or data by which

any one of them can be proven. It is not known and there is at present no way of knowing how much illness or incapacity exists, either among employed persons or among any other class of our population. It is not known and there is at present no way of knowing what is the average wage. It is not known and there is at present no means of knowing whether the burden of illness is or is not heavier than the average employe can bear without assistance. It is not known and there is at present no means of ascertaining whether existing agencies are adequate or not. Finally the claim that social insurance is the best remedy for existing conditions is a pure assumption. Statements as to the number of persons sick in the United States at any one time, among wage earners or any other class, or among the population as a whole are based entirely on estimates and not on proven facts. We are not at present able to say how many deaths there are in the United States in any one year, and we have absolutely nothing except *ex parte* estimates as to the amount of illness. The Registration Area of the United States Census which includes those states and cities which have complete returns on deaths included for 1919 only 79.7 per cent. of our population. In the present stage of our knowledge of health conditions in this country, it is impossible to make any positive statements as to the amount of sickness, either among employes or any other class. The average amount of time lost each year through sickness on the part of wage earners is not known. Existing estimates on all these points differ widely, depending on which side of the question they are intended to prove. For instance, the brief prepared by the American Association for Labor Legislation states that approximately nine days a year are lost on account of sickness by each employe. On the other hand, Mr. Mark A. Daly, General Secretary of the Associated Industries of New York State, presented figures drawn from the payrolls of one of the largest associations of employers in this country, showing that in July, August and September of 1919, out of 131,146 employes of three hundred firms, 3.2 per cent. were absent because of illness, while 3.9 per cent. were absent for personal reasons; that the number of hours lost for illness were 336,468½ or about 10 hours per employe per year, a little more than one day, while the number of hours lost for personal reasons were 357,931½. Mr. Daly's figures are of course, for a short period of time and for a limited group. They are, however, a definite statement drawn from actual records rather

than an estimate based on general considerations. The wide divergence between these figures and those presented by the advocates of social insurance tend to show that today no one knows how much time is lost through sickness among wage earners throughout the country and that it is impossible to make any dogmatic statements on this point.

The second proposition which is assumed by the proponents of social insurance is that whatever may be the financial loss sustained by workmen through illness, it is a burden which it is beyond the power of the individual workman to carry or as stated in the argument of the American Association for Labor Legislation, "Wage studies show that the slender savings of workmen are inadequate to meet the burden of sickness." In proof of this fact is quoted the report of the United States Immigration Commission for 1909 which states that sickness was the apparent cause of poverty in 38 per cent. of the charity cases studied. Let us examine this statement and see what it involves. The argument of the proponents of social insurance is that the average American working man is not paid a sufficiently high wage to enable him to bear the expense of the average amount of illness without being pauperized thereby and that he must have state aid to bear the burden. Mr Daly showed that wage loss for three months for 131,146 employes was \$1.06 each and that the annual loss for each workman in the employ of members of his association was \$4.24 a year, about one day's wages. The New York State Industrial Commission in its official report shows that in November of 1919 the average weekly earnings of factory employes in New York State were \$25.37 and in December of the same year, \$26.32, or \$1,368.64 a year. This is on the basis of a six day week. According to these figures the average loss in a year through illness for each of these employes would amount to about one day's pay or 1-312 of the annual income. This would hardly seem to be a burden which the average working man cannot carry without assistance from the state. The Bureau of Labor Statistics of the United States Department of Labor in its report for November, 1919, presents an exhaustive tabulated report on the cost of living in the United States in which figures are presented showing the actual expenditures of 848 families in 60 cities in various parts of the country, each family consisting of five persons, man and wife and three children. After presenting the cost of housing, food and clothing, an elaborate tabulation of miscellaneous expenses in thirty

or one-half of the cities is shown. One heading gives the annual expenditure per family for sickness including under this heading not only medical and surgical services, but also oculist, medicine, nurses, hospital care, dentist, eye glasses, etc. The total expense for this purpose for the average family of five persons a year is \$61.09 or \$12.21 per person per year. Under another heading is tabulated the money spent for amusements including movies, theaters, concerts and excursions. This amounts to an average a year of \$18.66, while the average expense for churches, lodge and society dues, charities, etc., amounts to \$34.73, making a total average spent each year for amusements and benevolencies of \$53.39 or an average of \$10.67 per person per year. If the average family spends \$61.09 a year on account of sickness and is still able to spend \$53.39 a year for amusements and benevolence, is it in need of state aid in order to enable it to carry the burden of its sickness expense? And if it is in need of state aid to carry one expense, why is it not equally in need of state aid to carry the other and why should we not have a compulsory plan for taxing all the people of the state in order to relieve the employe of three-fifths of the burden of excursions and moving picture shows?

The Daily News Almanac for 1920 shows that in 1918, the last year for which figures are available, there were in the United States 1819 savings banks with 11,379,553 depositors, having deposits amounting to \$5,471,589,948.00 or an average of 466.94 for each depositor. As it is estimated that there are approximately 20,000,000 families in the United States, apparently approximately one-half of them have savings deposits and reserve funds.

It may be argued that these figures are no more conclusive than those presented by the proponents of social insurance. This is quite true. Neither are they intended to be either conclusive or comprehensive. They are presented, however, with a view to establishing two assertions: First, that the statements on which the entire argument in favor of social insurance rests are assumptions and deductions based on insufficient evidence and that there is quite as much evidence against them as in favor of them; and second, what I wish to emphasize as a basis for an argument on another subject later on, that the principal difficulty in the discussion of any large questions of public health in this country is lack of authoritative and comprehensive data on the fundamental questions involved.

PUBLIC HEALTH AND CONTROL OF DISEASE.

The third essential proposition, viz., that present methods of promoting public health and controlling disease are inadequate, involves a discussion of the entire question of present methods of medical practice and public health promotion. This would obviously involve too much time and take us too far afield. Its discussion would require a study of morbidity and mortality rates throughout the country compared with those of previous years and with other countries, together with a comparison of methods of medical practice and of public health organization and administration in this country and abroad. Here again, while there is an immense amount of data available for consideration, no definite, positive and reliable figures are obtainable. In other words, on this question as on the two preceding points involved we do not possess the knowledge necessary to enable us to make definite and positive statements. Here again, the burden of proof lies on the advocate of the new plan.

Of the four essential propositions on which the proposed plan rests, therefore, we are compelled to admit that the first three cannot be positively determined owing to insufficient knowledge. But even if all three were conceded, the fourth point would still remain to be proven. Even if it could be shown that employes as a class are suffering from an undue share of illness, that the financial cost is greater than they can bear without assistance, and that present methods for remedying this situation are inadequate, it still remains to be proven that so-called health insurance is the best remedy. At least five alternatives besides compulsory state insurance must first be considered. These are:

1. An increase in the wages paid to employed persons so that each one will be in a financial position to bear his own burdens without need of assistance from the state. This is the economic remedy.

2. The development of state, municipal and local health agencies to a point where preventable disease will be reduced to a minimum and the burden lightened by reducing the amount of sickness. This is the public health remedy.

3. The development of voluntary thrift and savings habits among employes to a point where through increased thrift and foresight they may be able to provide for their own emergencies. This is the personal remedy.

4. The development of voluntary industrial insurance on the part of employes and employ-

ers in industrial corporations and groups. This is the cooperative industrial remedy.

5. The development on the part of wage earners and employers themselves of voluntary assessments and benefits through trades unions, benefit associations, etc., for their own protection. This is the cooperative social remedy.

Volumes have been written on each of these subjects.

All of them are possible alternatives to compulsory social insurance involving the development of existing methods. Naturally they must be given careful consideration before any new and untried scheme is considered. Just as the surgeon would naturally consider every alternative method of treatment for a condition before advising and performing a radical operation, so the possibility of the development of existing methods to a point where they will be adequate must be considered before any new untried method is adopted.

It is probable that this problem of economic loss to employed persons through illness, when it can be definitely defined and limited will be solved by a combination of all of the five methods suggested rather than by any single one. In fact, the first alternative alone as stated above has well nigh eliminated the problem. Since 1914, when the agitation for compulsory social insurance in this country began, the increase in wages has practically taken the American working man out of the field of compulsory social insurance as proposed at that time. When this plan was first proposed, the maximum limit under the British law was \$800.00 a year; i. e., all persons with an annual income exceeding this amount were exempt from the operation of the health insurance law. The American Association for Labor Legislation evidently felt that it was making a large concession to different conditions in this country when it fixed the maximum limit at 50 per cent. higher or \$1200 a month. Yet today how many American working men are there whose gross annual income is below this amount? Figures on this subject are so numerous and popular knowledge so general that it is hardly necessary to argue the point. A few illustrations, however, may be cited.

The American Medical Association in publishing its journals, operates probably the largest exclusively medical printing plant in the world. There are at present on the payroll of the Association 285 persons of whom 120 are employed in the printing department. In 1906 the union scale for printers was \$17.50 a week. In 1916, it was 24.00 a week. Today it is

\$46.00 a week or \$2,392 a year, approximately \$200 a month. The journal has one night pressman who draws \$250 a month. Out of 50 employes on one floor of the Journal plant, ten own and drive automobiles. Most of them own their own houses and several have flat buildings and houses for rent. In 1915 printer's apprentices or young boys learning the trade, generally boys living at home, were paid under the printer's scale \$6.50 a week. They are now paid \$14.00 or within \$3.50 of the scale for the full fledged journeyman printer ten years ago. Packers' boys in the pressroom who used to receive \$10.00 a week are now getting \$22.50 and \$25.00, more than the highest paid printers in the plant received ten years ago. As the scale for the printing trade is practically the same all over the country, it will be seen that the average printer earns twice the minimum wage specified in the social insurance bill and that the printing trade would not be in any way affected by the proposed plan.

The same thing is true in the building trades. Chicago last year experienced a long drawn out strike on the part of the building trades unions for a dollar an hour for an eight-hour day, with \$1.50 for overtime. This was finally given to them and within six months the **carpenters** secured an increase to \$1.25 an hour or \$10.00 for an eight-hour day. Today building in Chicago is greatly hampered on account of the inability to get carpenters at this price as Detroit with an equally urgent building problem is drawing practically all the carpenters away from Chicago by offering them \$1.50 an hour or \$12.00 a day for an eight-hour day. I recently had occasion to go down West Madison street near the river where the large employment agencies are located and noted the signs displayed in front. Ordinary unskilled day laborers are offered \$4.00 and \$5.00 a day. One placard called for a night fireman of a heating plant at \$125.00 a month. Several weeks ago I drove fifty miles through the richest farming part of the State of Illinois commonly known as the corn belt. I learned that ordinary farm hands were now paid \$70.00 a month with room, board and laundry. Window washers in Chicago are now getting \$36.00 a week or \$6.00 a day and are about to strike for \$40.00. Washwomen and scrub women are getting \$4.00 a day. A telegram from New York appeared in a morning paper the other day to the effect that John D. Rockefeller was offering \$4.00 a day for ordinary labor on his country place and was unable to get it as neighboring employers were

paying \$5.10 or \$1.10 higher than Mr. Rockefeller for ordinary unskilled labor. Obviously, conditions here and in Germany are not comparable. In a letter which was read in the Senate and which appeared in the Congressional Record for May 1, 1920, Mr. F. Herbert Chamberlain, President of the Haydon Chemical Co., of Garfield, New Jersey, writing Senator Frelinghuysen regarding the development of the dye industry in this country, states that he spent several weeks in Germany in the fall of 1919 studying the aniline dye industry in that country and that the Badische Anilin und Soda Fabrik plant employing 16,000 working men, is paying them today wages that at the present rate of exchange are approximately nine cents an hour for an eight-hour day and this rate had existed only since June, up to which time they were receiving only eight cents an hour. He also states that in this country working men in similar plants are receiving 40 to 50 cents an hour for the same work. Disregarding for the time being the other proposed remedies for whatever situation may be proven American working man today is far beyond the to exist, it seems evident that the average economic stage where he needs compulsory state insurance to enable him to bear the burden of whatever sickness he may experience and that any compulsory insurance law with any such limit as the model bill of the American Association for Labor Legislation, viz., \$100.00 a month, would today include no one but boys office girls and domestic servants.

FAILURE OF SUFFICIENT PROOF.

If the arguments which I have endeavored to develop are sound, then it must be admitted that the advocates of health insurance have failed to make out a case for their proposal. The burden of proof is on the proponents of the plan. It has not been shown that so-called health insurance is needed, that it would be any improvement over present conditions or that it is the best remedy for existing conditions. Until convincing and conclusive evidence on these essential points can be produced, backed up with statistics of a sufficiently broad scope to be acceptable as proof, the decision as to the value and desirability of the proposed plan must be the Scotch verdict of "not proven."

THE ATTITUDE OF THE PROFESSION.

What should be the attitude of the medical profession on this subject? In order to answer this question, it is necessary to study it from the standpoint of the public rather than from the standpoint of physicians. The proposed

plan as we have seen is a question of public policy and not a medical problem. It is going to be settled by the people either directly or through their legislatures and not by the medical profession. The American people are the jury in this case. We must, therefore, consider the subject from their point of view.

The attitude of the organized medical profession has been definitely and officially determined. The American Medical Association at New Orleans session last month adopted by a practically unanimous vote a resolution declaring its opposition to any plan of compulsory contributory insurance against health or any other plan of compulsory insurance provided, controlled or regulated by any state or the federal government. A number of state associations have adopted similar resolutions. The attitude of the organized medical profession as determined by its duly elected representatives is, therefore, unqualified opposition to compulsory state health insurance.

But it is claimed by the advocates of this plan that it is really a public measure of the greatest importance and that its adoption will result in improved health conditions and increased efficiency. Shall the medical profession which has for the last fifty years led in the development of public health legislation and administration take an attitude of opposition and obstruction rather than of advancement and construction? Such a policy would be contrary to the traditions and instincts of our profession. It would furthermore be a relinquishment of our leadership in public health development. Nor is it necessary for us to adopt any such attitude. If the arguments and reasoning which I have endeavored to present are sound, then the attitude of the American medical profession on this question is clear. We have shown that so-called compulsory health insurance is not a public health measure. Yet a considerable share of the support that it is receiving is due to the honest belief on the part of many of its supporters that it is a measure for the improvement of public health conditions and to this extent it must be regarded as a part of the popular movement for health conservation. So that while it is our duty, as the leaders and advisers of the people on health matters, to oppose this plan because we have no reason to believe that it will accomplish the good which its

supporters anticipate it is equally our duty to point out the true line of progress and to utilize the energy now being expended in the wrong direction by turning it in the right direction. If we are going to oppose health insurance and prevent its adoption, as we surely can if we will place the facts fairly before the public, we must, in order to keep faith with the public, be prepared to present an alternative proposition which will accomplish all the good claimed for social insurance without any of its defects.

In the last fifty years, scientific medicine has made greater progress than in any preceding 500 years. Yet our methods of practice as far as the economic side of medicine is concerned remain unchanged. Everyone admits that there must be readjustment in the methods of medical service. Health insurance is only one of many solutions proposed. Which is the best? We do not know. We do not have the essential facts on which to base an opinion. As scientific men, we must investigate and then arrange and study all the facts before we can form an opinion. This is the true scientific method.

The fatal defect of social insurance so far as this country is concerned is that it provides for a part rather than for the whole. The principal defect in the argument of its proponents is that there are no data available on which to base a sound argument. This situation is one which has always confronted the advocates of public health legislation. We have not known in the past nor do we know today the physical, economic and social conditions existing in the various states, which affect the health and the efficiency of our people. Our entire public health program which has been built up in the last fifty years, while based on the best available information, has been hampered and delayed by lack of definite, positive knowledge regarding the prevalence of disease and the physical condition of our people. This fatal defect in the argument for social insurance has also been the greatest obstacle in the development of effective and adequate public health organization and administration. The rational, sensible plan to follow in creating and developing a health administrative body, whether federal, state or municipal, would be first to inquire as to the need and the amount of work to be done and then to plan the machine in accordance with the work to be accomplished.

This is the practical, businesslike method of procedure which must instantly commend itself to everyone. Yet it has in no instance been followed in the development of public health in this country. A lack of definite, accurate and reliable information is today the chief obstacle in the way of the reorganization of our federal public health activities and in the development to their highest efficiency of all of our state and municipal health organizations. The agitation for the passage of so-called health insurance laws in the different states gives us an unusual and unprecedented opportunity to impress on the public and the legislatures the lack of positive knowledge on physical and social conditions and the importance of developing our state public health activities along rational lines and to the fullest extent and the absolute necessity of securing complete information regarding health questions as a basis for such reorganization.

LEGISLATURE.

To the legislators and the public of those states in which bills for compulsory state health insurance may be introduced, the medical profession may say, "We recognize the plan proposed in this bill as an effort on the part of its advocates to improve health conditions. The plan proposed, however, is not in reality a health measure and is not suitable for this country in that it affects only a portion of our population and is based on class distinctions that are undesirable in this country and not in harmony with our institutions. It provides only for wage earners of a certain class and is, therefore, undemocratic and unwise. The plan is further objectionable because it seeks to develop public health administration through a new and independent body rather than through the recognized and legally constituted health authorities of the state. It is not possible for the advocates of this measure to prove their claims owing to the lack of definite knowledge regarding the sanitary, social and economic conditions which are affecting the health of our people. This existing ignorance on vital questions of the utmost importance to our people is also an obstacle in the development of our state health activities. The medical profession is vitally interested, as it always has been, not only in the health of the wage earner, but also in the health, well-being and efficiency of every man, woman and child in the state. It is the duty of the

state to protect every man from disease, whether he be employe or employer, wage earner or factory owner, millionaire or pauper, and to enable him to secure and retain to the utmost good health, efficiency and long life. But such state public health work should be for the benefit of every citizen and not for any class. It should be in the form of united action by the people of the state for self-betterment rather than in the form of pauperizing subsidies and emasculating sick benefits. It should be carried on through the legally constituted health authorities of the state and not through a board of representatives of special classes and it should be based on the widest, fullest and most complete knowledge obtainable for the existing conditions in this state regarding the present physical condition of every man woman and child therein. As scientific medical men we insist that any measures for the improvement of our citizens must be based on proven facts and not on unproven theories. We, therefore, resolve that, instead of adopting any incomplete, illogical, undemocratic and ineffective measure, the state legislature appropriate a sufficient amount of money to enable the state Council of health to make a complete and exhaustive study of the entire state, showing the amount of sickness existing among our people, the causes therefor, as fully as it may be possible to determine, the social, economic and industrial conditions existing in the state and their influence on the health of the people, together with any other facts which may be pertinent and to submit a report at the next session of the legislature showing the exact conditions existing together with recommendations as to how the existing health organization of this state may be increased and developed to a point where every citizen of the state, regardless of his economic condition or industrial status may be protected from disease and may enjoy the highest possible degree of good health, efficiency, happiness and long life."

COMPULSORY HEALTH INSURANCE, A MODERN FALLACY.*

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On or about February first when the price of fresh eggs and chicken feed was at its height, I wrote my farmer asking him why he was

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not sending us any eggs. A few days later I received the following laconic answer, "the pullets look good but lay no eggs." Superficially examined, Compulsory Health Insurance looks good, but unlike my pullets it has laid eggs, which, when carefully examined are all found to be addled.

HISTORICAL DATA.

In attempting to write a short paper on Compulsory Health Insurance one is confronted with so many serious objections that one scarcely knows where to begin, hence, I will, in this paper confine myself very largely to objections, which, I have myself encountered and leave theorizing, the long suit of the proponents of Compulsory Health Insurance, to those who possess a more vivid imagination. However, in order to get the right perspective it will be necessary to refer to just a few historical facts. Along in the late 70's, German Socialists discussed the matter at some length and in order to appease the clamor of the proletariat and because he saw that it would strengthen monarchical government, the far-seeing Bismarck adopted their suggestions and in 1883 Compulsory Health Insurance was legally established in Germany. Bismarck was a thorough believer in a monarchical form of government and eagerly grasped at any scheme which he believed would strengthen the monarchy. Anyone interested in Bismarck's philosophy of government will find a splendid exposition of it in volume 11 of Carl Schurz's memoirs. That Bismarck was correct in his prognosis as to the effect of Compulsory Health Insurance upon the German mind few thoroughly familiar with recent events will doubt. It is a very great question whether German autocracy and German militarism would have lasted as long as it did had it not been for Compulsory Health Insurance, old age pensions, and the rest of the hybrid ilk, the offspring of autocracy and socialism, nor whether the German military party would have been able to start the conflagration that has devastated the whole earth had not the German proletariat been tied hand and foot to the government by these schemes. It is indeed fortunate that the German bubble has been pricked and the old German regime destroyed, otherwise German propaganda aided by a few misguided, deluded American theorists might have succeeded in foisting this nefarious scheme upon the American people.

A wise farmer never swaps a good horse nor does the wise legislator meddle with those departments of human endeavor which are relatively well managed under present conditions. I believe American citizens as a whole have better and more efficient medical care than the citizens of any other country. This opinion is based upon a rather large personal experience with medical men and their ways of handling patients both in this country and Europe and upon the fact that the average loss of time from sickness by the American laboring man is considerably less than a similar loss in most other countries and particularly in those countries like Germany and Austria where Compulsory Health Insurance has been in force the longest, and finally, because our mortality statistics show up very favorably when compared with these same countries. From our government statistics¹ and from the mortuary statistics of the New York Life Insurance Company² we have a right to conclude that the average life expectancy in the registration area of the United States is to-day approximately fifty years, at least as good if not better than in those countries which have Compulsory Health Insurance. This splendid showing is largely due to the fact that the individualism of American medical men has not been unduly hampered nor has their enthusiasm been crushed out by an excessive number of governmental restrictions.

The fact that the American medical men have not been unduly hampered in their work, not only has much to do with the general excellence of their medical services, but accounts in large measure for the fact that so much of the world's progress in medicine is due to them. It is doubtful whether the medical men of any other nation have contributed so much to the advancement of medicine and surgery during the past twenty years as have our American confreres.

In support of the last statement I need but call your attention to the fact that it was a Kentucky country doctor, Ephraim McDowell, who performed the first laparotomy for an abdominal tumor. Practically all of the early work on appendicitis was done by American surgeons. Most of the recent work in gall-bladder surgery

1. Gore, John K.: Paper read before International Congress of Actuaries.

2. Rogers, Oscar H.: Chief Medical Director of the New York Life Insurance Co., personal communication from.

and stomach surgery was done by American surgeons and much of the improvement in the treatment of both pulmonary and surgical tuberculosis is the work of our American confreres, certainly a record to be proud of, and one which should make us very slow in substituting a system which so far has proven an utter failure for the system which has been productive of such excellent results.

INFLUENCE ON HEALTH.

The claim that Compulsory Health Insurance would encourage personal hygiene and right living, is completely refuted by the experience in those countries where it has been tried and also by the experience of every practitioner of medicine with a large practice. To the contrary, it always has had and always will have a strong tendency to increase immorality and disregard for the ordinary laws of personal hygiene, because when the average man is assured free medical service and two-thirds pay for loss of time he is much more likely to throw to the winds all precautions in this regard. What is almost equally bad, it will compel the honest, clean living man to actually pay for the wrong doings of the immoral and dissolute individual. Let us take a concrete case. Six boys graduate from high school together, four are hard-working, frugal, clean fellows with serious purpose in life, one of the four, in fact, is trying to earn enough money to go through college. The fifth, is one of the lazy, shiftless kind who would rather loaf than work, who never loses a chance to lay-off a day or a week, particularly if he can be assured two-thirds pay. The sixth is an inveterate smoker of cigarettes, spends his evenings in ill-ventilated, smoke-laden pool rooms, shortly buys himself a specific urethritis and later acquires syphilis. The fifth one will be at least twice the burden upon the insurance fund as is any one of the first four. The sixth one will be at least four times the burden on this fund as is any one of the first four. What right has any just government to take the earnings of the first four against their will and give them to the last two? A just government protects the weak from oppression and exploitation by the strong and unscrupulous, but the wise government does not penalize the strong, industrious, clean-living and thrifty and favor the weakling, the lazy, the shiftless and immoral, and yet, this is just

exactly what a system of Compulsory Health Insurance will do, and just as soon as the government by legislative enactment will favor the latter at the expense of the former, race degeneration must begin and continue until such baneful legislation is again wiped from the statute books. This is not theory. Some of the recently passed welfare laws are already favoring the weakling at the expense of the strong. It is an actual fact that because of some of these laws the weakling is actually being favored and because of corruption in government, the crook in many of our large cities has an actual tactical advantage over the honest man. A most interesting volume could and should be written on this subject. The facts brought out would be a surprise and a revelation.

Our colleague, Dr. Chapman, will present statistics and argument, which, I believe, will prove conclusively the excessive cost of such a scheme, and I will try to prove to you that none of the departments of our government, neither State nor National, has demonstrated its fitness for handling such enormous sums of money wisely, economically or justly. I think it is putting it mildly to say that in this country we suffer from a notoriously, inefficient, more or less corrupt administration of government. Pull, favoritism, spoils and partisan politics, nepotism and petty graft are the rule rather than the exception. I have been a citizen of the City of Chicago for twenty-nine years, have watched city and county government rather closely and the above description is, I believe, a fair statement of what has been actually going on during that time. During the past year, the city has paid out in special fees to one, third class lawyer, who probably never before had had an income from private practice to exceed \$5,000 per annum, the enormous sum of \$47,500 of the taxpayer's money. In addition, it has paid a dozen or more other attorneys over \$99,000 special attorney's fees. During this year of mal-administration it has, in addition, constantly had upwards of two thousand ninety-day employes on the City payroll, from a total of about 18,000, or over ten per cent. Anyone familiar with industry knows that the employe who stays only ninety days on the job is almost worthless because it takes him about that long to become familiar with his duties and to become adjusted to his work. The reasons why the administration has employed these special

attorneys and ninety-day employes are, as near as I can understand, exactly two. First, the special attorneys and ninety-day employes needed the money and second, the administration needed their political support. Anyone with a particle of sense will see that that kind of government is inefficient.

The county administration has been no better during the years with which I have been familiar with it. Twenty-five years ago, I was resident physician at the county hospital. The service of the paid county employes was abominable, much of their time was spent in building political fences for their superiors. I have been connected with one or more semi-private hospitals ever since that time and nowhere have I seen such miserable service. The food was wretchedly bad. In my younger days I had been a hired man on several farms, a lumberjack in the pineries of Northern Wisconsin and a country school teacher, but never have I had to live on the unpalatable, badly cooked, poor quality of food that I was compelled to consume the nineteen months I was a resident physician. The reason was this, that the political overlord of the county had to get rich out of the food contracts and his satellites had to have a little of the swag. The man who was at that time the boss of the county had not done an honest day's work in ten years and yet he was able to live in a \$20,000 house, have a number of servants and a private carriage, and the money unquestionably came indirectly out of the county treasury and out of the mouths of the poor, dependent county patients. The usual game is this, bids for first class supplies are advertised according to the provisions of the law. The favorites of the politician in power always put in the lowest bids and get the contracts. They then supply fourth class material and charge first class prices or cheat on the weight, and they and the political overlord divide the spoils. The practice is so common and so hard to detect and punish that the official who will not stoop to it is considered a boob and made fun of. Another favorite way of wasting the taxpayer's money is to appoint friends with good salaries for jobless jobs. Several years ago, the seven drainage trustees appointed for themselves seven secretaries at annual salaries of \$3,500 each, and so far as anyone was able to ascertain not a one of them ever did a real day's work for the county. The

story is told that one day an honest man was appointed for one of these jobless jobs in the building department and when he came down and reported for work the chief looked at him in surprise and told him with a twinkle in his eye to walk up and down a certain street and see to it that the buildings did not step out of their accustomed places and obstruct the thoroughfare.

During the four years from 1912 to 1916 I was President of the Illinois State Charities Commission. We had under our supervision, but not under our direct administrative control, sixteen State Institutions with approximately twenty thousand inmates and four thousand employes and we had an excellent opportunity to study the advantages and disadvantages of government control of such institutions. I personally visited every institution one or more times, inspected practically every one of the hundreds of buildings, talked with hundreds of patients and dozens of employes and while during those four years the State Institutions of Illinois were exceptionally well managed and unusually free from spoils-politics, the best one could say for the medical and nursing service rendered was that it was mediocre. The reason for this is easy to find. From the very nature of things in institutions of this kind, there is an enormous amount of time wasted on paper work and red-tape. At best, advancement is largely by seniority and inefficient, incompetent seniors never resign and rarely ever die. By the time a real efficient man gets to the top his enthusiasm has usually been crushed out by non-essentials, or if this has not happened, he is hampered by inefficient subordinates of which he cannot rid the service. In this connection, let me call your attention to the following fact, namely, that while for many years approximately one per cent. of our population has been under the medical supervision of our Federal, State, county and city authorities, nothing of value in the treatment of diseases has been discovered by any of these departments since the organization of our government 144 years ago. Practically all of the marvelous advance in the treatment of diseases during that period of time is the result of individual effort by private physicians. When you consider the above and realize that this means that at the present time there are practically one million people under

the medical supervision of the various departments of our government, is it not strange that not a single great discovery for the cure of disease has been made by any of the men in government service during all these years, and yet, for anyone familiar with all of the phases of medical practice both public and private, it is just exactly what one would naturally expect.

NATIONAL INSURANCE.

How about our National government? We are informed that Congress this year in time of peace appropriated nine billion dollars with a visible income of six billion dollars. We are further informed that in the middle of March 1920, sixteen months after the signing of the armistice, not one single wartime commission has been abolished and each one is clamoring for more money than was appropriated for it during actual hostilities. In addition, we are informed that there are five thousand more civil employes in Washington now than when the armistice was signed. Some showing for government efficiency. In addition, we are informed that Congress sometime during the war appropriated fifty million dollars as a Contingent Fund for the use of the President and for which he was not to be called on for an accounting. We are informed that \$15,000 of this was used for one banquet and a few weeks later \$12,000 for another banquet. One week, the people of this country are urged by the federal government to be frugal, thrifty and saving, the next week, the Attorney General takes a mouthful and assures us that he is going to prosecute the profiteers, but does practically nothing, the next week we get an S. O. S. call to lend the government all the money we can scrape together and in the meantime the Federal government spends the hard-earned money of its citizens like a drunken sailor on shoreleave. This is not party politics, both parties are equally culpable. If you or I managed our affairs as badly as do most of the cities, counties and states, and even the Federal Government, we would soon be in the hands of a receiver or candidates for the poorhouse.

In spite of all of the above facts and many more that will be cited, there are still some people in this country who would like to turn over the supervision of the medical treatment of from sixty to eighty per cent. of our population and the expenditure of over one billion

dollars per annum to one or the other of these governmental agencies. The mental processes of some of our ultra high-brows are beyond comprehension and are as inscrutable as is the enigmatic smile of Mona Vann. These ultra high-brows realize, as everyone must, that things are very imperfect. Then, instead of devising methods to simplify our government processes they try to improve the conditions by multiplying the very agencies which are the cause of the present unsatisfactory conditions. Let me illustrate by a concrete case. Some years ago, a group of very estimable people in Chicago thought conditions could be improved by establishing a department of Public Welfare and prevailed upon the then Alderman Merriam to draft and present an ordinance before the Council establishing such a department. The first director of the department was an earnest, serious-minded, efficient young woman, who did everything in her power to make the department an agency for good. Since then, the personnel of the department has gradually deteriorated until now it furnishes a soft berth with good pay for an administration favorite, and Professor Merriam at a political meeting which I attended last Spring, stated within my hearing, that if he should meet the department on the street he would cross to the other side and disown it as his child. This is the common experience with many of these welfare moves.

Because of the constantly growing number of office holders it is getting more and more difficult each year to dislodge an inefficient public official. In most cities the charity institutions have for years been used by political bosses to further their selfish ends and lately even the school nurses and tuberculosis institute employes have been similarly used. If, now in addition we should have a large army of Compulsory Health Insurance employes and put in the hands of those unscrupulous officials the spending of millions of dollars of the taxpayer's money it would soon become practically impossible to dislodge a corrupt administration and in that way our Republican form of government would actually be seriously menaced. We would still be a republic in name, but a bureaucracy in fact. The fact of the matter is, that we have not progressed far enough in civilization to make it safe to give this enormous additional power to any government agency and when the time comes to make it safe

not even the most enthusiastic Compulsory Health Insurance proponent will be able to conjure up any excuse for it.

PROBABILITIES.

Compulsory Health Insurance is but the entering wedge. If this gets by the next will be old age pensions, and the next unemployment pensions and finally when we will be so bureaucratically oppressed that honest, ambitious, industrious men cannot stand it any longer the last act in the tragedy of errors will be revolution, anarchy and chaos, the kind of an experience most of Europe is just now passing through. Denmark, twenty-five years ago, was one of the most happy, prosperous and contented countries on the face of the globe, but since that time it has practically gone through most of the above experiences and is now approaching the last act. First, she passed a Compulsory Health Insurance law, a few years later, old age pensions, then an unemployment act with seventy-five per cent. full pay during non-employment until many working men prefer to draw seventy-five per cent. pay and loaf rather than work and actually refuse to work unless the most unreasonable demands are granted. In addition, they have just passed a law by which workmen out of employment get a reduction of fifty per cent. on essentials, such as food, clothing, etc., with the result that production has fallen off greatly, living expenses have gone up enormously and the middle-class man, the bulwark of the Nation, is literally being crushed to the wall. This time our high-brow reformers have started something with a boom-crang attached to it, which, if it becomes law will give them the punishment which they will have justly earned. The unfortunate thing about it all is, that not only they, but all others will suffer because of their stupidity.

The best that can be said for Compulsory Health Insurance is that it might temporarily act as a palliative. It is an axiom in medicine and surgery and should be in political economy that a palliative must not be used continuously for any considerable period of time unless the case is hopeless, and while economic and political conditions are admittedly bad in this country to-day, and for that matter nearly the world over, I for one, am not willing to admit that they are utterly hopeless.

CONCLUSION.

The Puritans, the Quakers, the Huguenots and many others left Europe, braved all kinds of hardships and dangers in order to escape religious persecution. The German and Aus-

trian 48r's came to this country to escape political persecution and during the last seventy years many of Europe's most desirable citizens have come to our shores to escape these as well as other forms of paternalism. I remember only too well the story of how my dear old friend, Henry Klein, utterly disgusted by petty paternalism, in the middle 50's at the age of forty-five sold his little farm in Southern Germany, gathered up his little brood, migrated to the wilds of Wisconsin, there to work out his and their salvation under the blue sky of free America. Our government has spent billions of dollars, our people have sacrificed thousands of precious lives and suffered many privations in order to help the German people rid themselves of autocracy, militarism, bureaucracy and paternalism. It is your duty and mine, if we would be true to the great trust imposed upon us, to fight tooth and nail in order to defeat every attempt that misguided theorists may make to impose paternalism upon us and to see to it that this country be kept as free and remain as good a place to live in for our children and our children's children as it was when we first saw the light of day.

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COMPULSORY HEALTH INSURANCE IS A SIGN OF ECONOMIC DEGENERATION.*

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At no time in the history of medicine has our profession been mercenary when the public welfare was at stake. Of its great service in times of war, and of its many discoveries in times of peace, the disciples of Hippocrates are justly proud. We are continually trying to prevent disease so that there may be no further need for us to cure it. With this end in view, we recognize that only a contented profession, free from the uncertainties of the future, can produce conditions favorable to the consummation of this humane idealism. If compulsory health insurance is fundamentally necessary to reach this goal of human happiness, then I am sure our profession would gladly go in sack-cloth and ashes to render this form of service to mankind. But before we decide to humble ourselves to any form of menial service, we would first be convinced that our service is a real service and not a work of supererogation.

In speaking first of our national and then of our individual welfare, I hope that I shall

*Read at 55th Annual Meeting, M.S.M.S., held in Kalamazoo, May, 1920.

be able to show the character of this service, in other words, I hope it will become clear whether the arguments of those who advocate this new way in which we are to serve the public, or of those who oppose it, are sophistries.

For three years we have had this matter before us, and much has been written for and against it. In analyzing the arguments in favor of the insurance scheme, I have almost come to the conclusion that its supporters never reason further than that poverty is the cause of sickness, or sickness is the cause of poverty; that we must devise some method of ameliorating the condition of the improvident and those suffering as a result of our insufficient wage system. There is no intention on the part of these people who reason thus to thoroughly eradicate the evil itself, root and branch. This is shown by its history. Bismarck adopted the ideas of Ferdinand La Salle and embodied them in the "health insurance program," with the intention of thus appeasing the proletariat and keeping down socialism. From its history we must therefore draw the conclusion that those who are advocating health insurance are either themselves bolshevists or socialists, or are on the other side, trying to allay social unrest by throwing a "sop" to the proletariat. I shall try to prove that they are doing this at the expense of our national welfare in general and our professional advancement in particular. If the system of health insurance is advocated by the bolshevists and socialists, we doctors have but to join the ranks of the oil magnets, automobile manufactures and other money kings and leave the debate against these vagaries to the good people of the United States. But if the cry comes from the upper class that the improvident must be cared for, that social unrest must be treated with a quarter grain of compulsory health insurance, we cannot afford to stand by as disinterested spectators, but must critically examine the advantages or disadvantages of health insurance; we must answer the claim that it prevents sickness and economic loss; we must also hear the voice of the farmer and disinterested producer whose taxes are increased for the purpose of helping the city proletariat to benefits which they themselves do not enjoy.

There are many even in our American Medical Association who seem to think that we have already advanced in this discussion beyond the stage of argument and that it is now time to act. Men in authority who are supposed to represent our interests tell us that compulsory health insurance is inevitable, that the represen-

tative men in the profession approve of it. Now, I, for one, am not convinced that this is the general sentiment of the medical profession, even if the literature issued by the American Medical Association has been strongly advocating the adoption of this scheme. It is a matter that should, in my opinion, be decided by the practitioners who are fully conscious of the delicate relations which exist between patient and physician, and not by a body of men who have not had any, or little, experience in the practice of medicine and are too easily misled by the arguments of propagandists. By adopting health insurance, we are completely changing the policy of our profession as over against the public. The enlightenment which has followed from the discussion of this question in our local societies in spite of the literature of the American Medical Association on this subject has prompted the House of Delegates, this spring, to unanimously vote against compulsory health insurance.

In the discussion of the various phases we must not overlook the teaching of history nor the elementary principles of economics, for when a question of national welfare is concerned, we must form our conclusions on incontrovertible and basal facts. I shall therefore endeavor to show in the light of historical and economic principles that compulsory health insurance would be a grave national blunder, and that it might contribute to our national decay.

The general unrest which is causing so much uneasiness, and which all thoughtful men recognize as an ominous factor in our national life, existed before as well as after the war and stands in direct ratio to the development of industry in this country. Few solutions but many explanations of this social phenomenon are given; manufacturers attribute it to the unreasonable attitude of labor; the farmer to the trusts; others even slyly intimate that the democrats are responsible. Whatever cause may be attributed for this condition, the fact faces us that colossal industrial development has occurred during the last four decades. Ambitious men find a shorter road to wealth and opulence in industry and commerce than in agriculture. The enormous wealth resulting from new industrial methods has a greater lure than the slow but sure rewards of agriculture. Therefore industry occupies the center of human interest while agriculture is being neglected. The city populations are rapidly increasing while the rural communities are being depopulated.

INDUSTRY AND PRODUCTION.

Now, what is the relation of industry to production? Political economists differ as to what constitutes production. Some would only have agriculture, mining, fisheries and forestry embraced under this term, while all processes of refining, manufacturing and preparing for consumption would be excluded. Others, however, are of the opinion, that production includes both the material and immaterial forms of production, that is, mining, agriculture, fisheries, forestry, money exchange, manufacturing, the arts and the sciences. It seems to me that the former is the most logical, for man in his native state can develop out of the soil all the necessities for his existence. According to this view, the inhabitants of the cities are merely consumers, while those who extract the natural resources from the soil are the actual producers. Leaving this argument aside, one can easily see that if the state neglects the production of its natural resources and overemphasizes manufacturing, it will soon run short of its raw material and be obliged to import it. This condition is always fraught with danger since foreign states may be envious of or hostile to the manufacturing and commercial policies of a state which is in need of raw material. Has not Canada recently placed an embargo on wood pulp of which we are so much in need? History proves that a nation's continued prosperity largely depends upon the conservation and energetic development of its natural resources. The United States cannot safely overdevelop her industries and commerce at the expense of agriculture and other modes of obtaining natural resources. A recognition of these principles would be a safeguard against bolshevism and revolution; for to balance the relation between industry and agriculture would mean a perfect distribution of wealth between country and city, and would be a more potent agent in ameliorating social conditions than all the health insurance schemes that have ever been projected.

The great over development of industry and neglect of agriculture has during the last few decades caused an excessive urbanization in this country. In this state of Michigan, according to Verne B. Church, there are 18,232 idle farms; 46,000 men have left the country for the big cities within the last three years. On all sides we hear of an ominous shortage of farm labor, and we are assured that farming is almost becoming impossible. While this is true, the large automobile industries in this state are paying agents throughout the rural districts to lure

the country boys to the industrial centers. This rapid and excessive urbanization, at the expense of the rural districts, is resulting in a rapid rise in the cost of living, and will eventually throttle the industries themselves.

Guglielmo Ferrero, the eminent Italian Historian, declares in his work on "Ancient and Modern America," that the disease which killed the Roman Empire was *excessive urbanization*.....To quote him:

The impulse towards the cities increased, and one day the Empire awoke to find that its cities were swarming with beggars, idlers, vagabonds, masons, plasterers, sculptors, painters, dancers, actors, singers—in short the whole tribe of artisans of pleasure and luxury. But in the fields which were expected to feed all these men who had crowded into the cities to work or to idle, there was a dearth of peasants to cultivate the land.....The scarcity of victuals became a permanent feature of this city; and the State had to furnish the city with the famous *Frummentationes*. -----The Roman Empire, instead of leaving its cities, to fight down the evil, tried to abolish it by artificial means; and those artificial means it ever applied more extensively, the more serious the evil became. Part of the urban proletariat, unable to live in the crowded cities, and seeing themselves condemned to sort of a chronic famine and gradual extinction would have returned to work in the fields. When the drain on the population of the countryside becomes too great, the evil admits of only one remedy; and that is, that life in the cities should be allowed to become unbearable to a certain number of citizens, so that they may be tempted to exchange it for life and work in the fields.....But the Roman State could not bring itself to let that evil follow its natural course. The result was that life was artificially made easier and more comfortable in the cities, and harder and more difficult in the country, whereas the natural trend of circumstances would have produced the opposite effect. The evil, treated in so ridiculous a way, became worse. The exodus of the peasants into the city increased, and brought a corresponding increase in the demands on the public purse for the amelioration of the conditions of city life. The intensification of the evil was met by an increase in the dose of the very remedy which aggravated it—useless expenditures in the cities, ruinous taxes on agriculture. Matters went from bad to worse, until the system reached the limit of its elasticity, and the whole social fabric collapsed in a colossal catastrophe."

What better argument could there be than this against compulsory health insurance and all allied measures such as the new scheme of the University of Michigan, known in Chicago as Vaughan's scheme, state medicine, church dispensaries, unlimited charities, and all the other plans concocted by the professional welfare worker in the interest of industry to keep a large proletariat from which it may draw?

Ferrero further states that, "While they tided over a trifling evil of the moment, they lay up for the future troubles and difficulties and dangers of infinitely greater gravity."

The objector may say, how about preventive medicine? Preventive medicine for the whole nation is another matter; it should be fostered and developed to a maximum degree, because it protects all classes: laboring, agricultural, professional and capitalistic. Preventive medicine is like the sentinel wolf who guards the pack against all foes, which for us human beings are especially the infectious disease.

But the palliative measures employed by industry to placate the restless proletariat have but a limited influence, for most wage earners are sensible enough to realize that higher wages, and not a sop, are the prerequisite to purchase efficient medical services. Measures of temporary relief are indeed rather inclined to become a menace to the public when they are proposed as a permanent cure by mercenary intellectuals and misguided social workers, who, because of their social standing, often exert more influence on public opinion, backed by industrial and financial interests as they are, than men of integrity, who are guided by fundamental principles and are true to their convictions.

Those who still delude themselves and the public by this phantasm of public health insurance always resort to sentiment when they are cornered. They will likely condemn my position as stated above, as soulless, although it is based on history and political economy. The world has never been governed by sentiment either in war or peace; it is ruled by the laws laid down by Adam Smith, Darwin and Herbert Spencer. Remove the opportunity for a parasitic existence, such as this health insurance scheme provides, the starving urbanite will follow his primal instinct and migrate to a more thrivesome habitat. Is the nation, with its millions of provident citizens, going to perish because of weak sentimentality for the submerged tenth? Until Lloyd George foisted this German scheme on the British, England, with great success, followed the laws which we have stated. She did not help the improvident, but she did help them out of England. We recall Mr. Micawber, who by the authority of English Law found a more agreeable existence in Australia, as mayor of a town, than in the debtor prisons of London.

After all, the highest type of social welfare can only be attained when nature is allowed to take its course. Artificial restraints and barriers may hem in nature's forces, but they will

eventually break forth with an accelerated momentum.

The law of production and consumption will soon teach society that something is out of joint, when urbanization becomes excessive and our cities are developed at the expense of the countryside. When we protect and hedge about the city proletariat by artificial means, such as compulsory health insurance, allied schemes, and charities, at the expense of the rural population, we thus fetter the fit in favor of the weak.

Another danger to national welfare which these artificial attempts at progress are bringing on is a bureaucratic state of society in which individualism and with it the incentive to progress are being crushed.

Modern civilization does not result from paternalism, but from individual initiative. Individualism when actuating collective groups, in the field of agriculture, labor, capital and the professions, expresses itself as competition, or collective bargaining, whereas paternalism favors only the few in power at the expense of the many. Would that we might remain a democracy that encourages individualism, and does not drift into paternalism and imperialism as so many republics have done. We recently fought for the principles of democracy, and has the great war not decided for us this issue of a paternal scheme for compulsory health insurance? We all hope for the revival of conditions as they existed in our boyhood days, during the administrations of Harrison, Cleveland and McKinley, when American ideals were still individualistic and democratic, and had not yet been infected by the canker of European paternalism and bureaucracy.

DETRIMENTAL INFLUENCES.

Besides being a national danger, compulsory health insurance is also detrimental to the individuals who are supposed to benefit by this plan.

Compulsory health insurance, both in Germany and England, according to many reports from reliable sources, has multiplied the shiftless and thriftless, legally pauperized the people and created a large army of malingerers. This scheme would be a God-send to that class of individuals who philosophically hope not for riches and honor, but for ease. Why work when the doctor will keep me on the sick list in order to increase his popularity with the people in his panel? Then comes our friend the malingeringer who, judging from the greatly increased number of British and German publications on malingering, appears every day with a new method of jipping the doctor. Manufacturers in Great

Britain, since the passage of this Insurance Act, have frequently complained of the loss of time to their concerns on account of malingering. If sickness is an economic waste, sickness plus malingering become even more so, unless the prevention of sickness by this law offsets the evil factor of malingering.

Statistics from England and Germany show no improvement in health over those countries in which this compulsory insurance does not exist. Providence and thrift, not only in the general meaning of the words, but from the standpoint of health, are discouraged under this legislation. Young men are usually reckless with their health until they assume the financial responsibilities of matrimonial life. They fear sickness, not so much because of its evil effect on themselves, as its evil consequences to those depending upon them. Under the proposed insurance act they would become more careless, and like some of our friends with automobile insurance, would speed it up, with little worry about the consequences. Instead of preventing disease, by reason of the proposed act, this legislation would have a tendency to lessen the incentive to hygienic living.

QUALITY OF MEDICAL SERVICES.

There is another important point not to be lost sight of in this discussion, namely, the depreciation of the quality of medical services rendered and the deterioration of the type of men who enter the profession. This would be a serious loss, not only in times of peace but also of war, to the whole community. The wonderful development of our profession, with its volunteer service, has no where been more strikingly illustrated than by its achievements during the last war. I am glad for this opportunity to address such a noble body of men. I am proud that I am a member of the medical profession, a large number of whose men represent the best in our American civilization. Our generation of physicians has fortunately not made the profession mercenary, nor has it made the treatment of disease its ultimate object, but it has sought to make medicine a science, and make all other departments of science contributive to its developments. And, what is the propelling force which has driven us on to the attainment of altruistic ideals? It is the free and unhampered exercise of individual initiative, not fettered by routine and deadening duties. How many of us, during the last influenza epidemic, in making our rounds, have not felt like a milkwagon driver, when the number of our calls would not give us time to consider each individual case with all our

powers of observation and judgment, to determine the exact nature of the malady? Should we not constantly be in this state of mind, if we were working under the piece work system of this compulsory health insurance scheme? Burdened by innumerable calls, we would finally lose our professional perspective. With the adoption of such an insurance law, with its degrading effect upon a part of America's intellectual class, would not an ambitious young man shun a class which had been degraded to the rank of the proletariat? The proletariat physician would have to join the labor unions and fight with them for an existence while the development of his science would be altogether out of the question.

But in the end the public weal would suffer most. Brend declares that three and four minutes were averaged per patient by English panel physicians for making a diagnosis. A patient recently told me that while enjoying the privilege of the German Insurance Act, she was wont to visit the doctor weekly for her complexion. Sir Francis Neilsen states that the practice of medicine in England is reduced to a question of physical endurance without regard for brains or ability.

Shall it be so with us?

HEALTH INSURANCE, CONSIDERED FROM AN ECONOMIC STANDPOINT.*

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Political Economy treats of the nature, production, distribution and consumption of wealth.

Insurance is a system by which multiple contributions make up a fund to be proportioned among the contributors in the event of calamity. Insurance can be written against any prospective loss for which figures are known.

Government may be patriarchal or fraternal. In the one a recognized head transacts the group business of its subjects in a paternalistic manner and in the other, group business is transacted by popular suffrage based on a declaration of and agreement to individual rights and proportionate individual responsibilities.

Under a paternalistic government the individual is submerged; without right of suffrage he need not accept attendant responsibilities. In a republic based on equal rights of individuals, each must bear his own responsibility else the economic balance becomes disturbed.

*Read at 55th Annual Meeting, M.S.M.S., held in Kalamazoo May, 1920.

Economic balance must start with production. When each has produced a share then distribution and consumption may proceed in proper balance. If an individual or a class is given a bonus from a general fund then philanthropy is extended and charity accepted. The acceptance of charity constitutes pauperism. Sound economics recognizes as paupers only those physically, mentally, or morally, disabled and distributes the burden of their care upon all society. The exercise of philanthropy and charity between equals must disturb the balance of their equality and is, therefore, unsound economics.

Health Insurance, so-called, comes to us from a paternalistic government, from Germany, where it was adopted in 1883 after Bismarck had said he would use social insurance to bind the working classes to the state. It has now been proposed in our republic, where individual responsibility is the foundation of government. As proposed it would pay money for time lost through illness, to certain described people; the money to come from these people in part, from their employers in part, and from their neighbors in part. Their employers and their neighbors do not share in the benefits proposed, for there is no definitely prescribed return exacted of these people. Without legal return by these people in prescribed manner, they would be the recipients of charity and to that extent, paupers. Their employers and neighbors which constitute the state would be philanthropists. That proposal in a Republic is unsound economics and cannot survive. When it can the Republic is ruined.

Insurance is sound only when distribution is proportionate with the amount paid in. No man expects to write checks larger than his deposit slips and continue to do well, and any insurance which permits a similar expectation is not true to the sound principle and has become a gamble. To obviate that by receiving donations from outsiders creates instantly two classes; paupers and philanthropists. These classes violate our foundation of government.

An untenable proposal, then, has been made and we are invited to discuss its details. Such a discussion should never have been permitted before state legislatures until the proponents of Health Insurance, so-called, had demonstrated the economic soundness of their plan. That it was not early spitted with logic was due, I believe, to four reasons:

1. Nobody was interested. Neither employers, employes, nor the medical profession had recognized such a need.

2. To legislators, the implied promise of the misnomer, "Health Insurance" has a public interest appeal which is great.

3. For many years, college instructors of Political Economy have depended too largely on paternal European countries for text books and training and have taught much economy which business men and legislators have had to reconstruct after leaving college.

4. A few energetic men can raise much hullabaloo by arousing hope.

The proposal as outlined in the "Standard" Bill and otherwise is one which has been known in Europe as "Sickness Insurance." It proposes cash benefit and purchasable service for certain wage-earners. That is insurance. It does not assure good health and does not offer any concrete plan for the improvement of health although it does make mention of the desirability of improving the public health. That is conversation. It lent to the proposal its human interest appeal. "Sickness Insurance" is correct nomenclature. Upon realizing this difference many persons have reversed the first impressions created by the more appealing title.

Health improvement and disease prevention we know to be matters of Hygiene and Sanitation. They are separate from calamities against which we would carry insurance and should receive separate consideration.

Sickness Insurance, which is the payment of cash money for lost time, can never prevent the loss of time; it can merely compensate. It is separate.

The proposal is that sickness insurance be compulsory for certain wage-earners and for nobody else. Why should one kind of insurance be compulsory and all others voluntary? I have read that voluntary sickness insurance has never been a success in any country where it has existed—truly a poor reason for compulsion. Why should one man be compelled by law to carry one kind of insurance and his neighbor not? Possibly the plan must be limited to industrial workers because these may be subjected to payroll check, while the rest of us are less readily accessible for compulsion. That is an excellent reason for limiting; for the word "compulsory" implies enforcement; enforcement implies constables and penalties which call forth visions of jail sentences and lost time for citizens who have failed to pay their weekly dues. The limiting, at least, is wise but it is not yet explained why anybody must.

The cost and the economic results of this untenable proposal, supposing that our Constitution had been changed to permit of its

adoption, have been made the subject of extensive research by several state legislatures. Illinois paid twenty thousand dollars for a two hundred and sixty-seven page report. The California, Connecticut, Indiana, Maine, Massachusetts, Minnesota, New Jersey, Ohio, Pennsylvania and Wisconsin legislatures have appropriated money and appointed commissions. Their reports give some figures which are of interest for the personnel of the commissions has been of mixed opinion. That their figures are very rough estimates is evidenced by the United States Commissioner of Labor Statistics who writes that his office has no information as to the average earnings per man of wage-earners in the United States. If that office has it not, then no other office has and without knowledge of average earnings there can be no knowledge of average compensation for lost earnings. However, the American Association for Labor Legislation came forward with a set of figures. The state commissions have endeavored to estimate and have been lenient in dropping their estimates toward the figures of the A. A. for L. L. and have published their conclusions. I quote from the report of the Illinois commission—May 1919:

"The cost of Compulsory Health Insurance in Illinois would be between fifty and sixty million dollars annually, conservatively estimated. * * * If existing Health Insurance carriers were used and continued their present amount of insurance, there would remain between forty and fifty million dollars to be carried in state or local funds established. This would inevitably lead to political control and management." This, I remind you, is for care and compensation only; no plan is in the bill for lessening the incidence of illness.

Private carriers state their expense of administration at 60 per cent., leaving only 40 per cent. for compensation.

Dr. Ochsner shows us the habit of increase which administration charges have under state control. For the state of Michigan the annual cost has been estimated at fifty-five million dollars. I ask you to visualize for an instant this, which is not insurance—hypothesis, Michigan proposes to buy annually fifty-five million dollars worth of instruction and practical application in Sanitation and Hygiene, a known article of proven value. Imagine the vast machinery and wonderful work Michigan could accomplish with fifty-five million dollars every year for the one purpose of preventing illness—or Illinois with sixty million.

I again quote from the Illinois report:

"There is no evidence that Compulsory Insurance has resulted in an improvement in health" referring to countries in which the plan operates.

After months of research and listening to the detailed claims of advocates and reviewing statistics and reading reports from other countries this commission believes that there has been no improvement in health and, further than that, it is convinced that it has heard not any evidence which tends to substantiate a claim of improvement.

The Illinois minority report concludes:

"Insurance supported in part by industry and the public may cause a greater interest in the prevention of disease."

It may, and has not. Sixty million dollars would, and has.

The cost estimates of the commissions acting for other states are proportionate. I pass them to avoid the confusion of an avalanche of figures and turn, for a moment, to figures for the nation, the A. A. for L. L. has estimated the average annual wage loss due to illness at five hundred million dollars or over. The National Industrial Conference Board has stated a conservative estimate as from five hundred million to seven hundred and fifty million dollars for forty million workers. This Board makes conservative estimate of the cost of Compulsory Sickness Insurance for the country at large at not less than seven hundred and twenty million and perhaps not less than one billion dollars per year. These lowest of estimates show the cost of the scheme to very far exceed the wage loss it is designed to partially compensate.

Since the money comes from the public instead of from the usual insurance source, there would be greater logic in eliminating the vast machinery, hiring the accountants only, and paying the bill.

There are no exact figures concerning either wage loss or the cost of Compulsory Insurance. However, the estimates of annual wage and wage loss are based on real figures, known and, at the time these estimates were made, more or less constant; while the cost figures of Compulsory Insurance are entirely speculative. In using these lowest estimates we should remember that where State expenditures are concerned advance estimates in the past have always been low. This might easily cost twice the estimated amount and we pay a billion and a half dollars annually to compensate a half billion dollar loss.

Now suppose for a moment—hypothesis: The Federal Congress has made perpetual appropriation of one billion dollars annually for the prevention of disease and for public instruction in Sanitation and Hygiene. Would that mean anything to you? Could it help these forty mil-

lion wage-earners to stay on the job and would it increase their economic output? It would.

In 1910 the census showed thirty-three and one-half million wage-earners in the country who would come under this law. Of that number it is estimated that one in ten, or three million three hundred fifty thousand would become industrial discards because of age or physical condition; because an employer who is to be responsible for a part of a man's sick bill will hire only proven healthy men. These millions of men then, could not obtain living employment, would not participate in sick benefits and would become legitimate paupers through disability, and the cost of their care would devolve upon society as an additional burden. Being bound to the state in such fashion may have been desirable in Germany under Bismarck but it has not yet been proven to be desirable in a republic whose virility depends always upon the initiative of its individual members.

At this point the proposal has been shown thus:

It violates known rules of Political Economy.

It assumes paternal powers and cares for a fraternal government.

It claims to be Insurance but advertises as Sanitation.

Its result is one of compensation at public expense; a thing which could be better accomplished by direct taxation and accounting than by the cumbersome political machinery proposed.

Its cost is out of proportion with the resultant compensation.

I should prefer never to have head any of the details of a proposal which makes such a picture as that but, if it is necessary that details be considered, I invite attention briefly to this:

The insurance proposed in what has been called the Standard Bill is faulty because the chronic invalid pays no more than the robust young risk; the man with six children to receive medical attention pays no more than the single man. In sound insurance preferred and hazardous risks are proportionately rated, always.

The thrifty and the shiftless are classed together in that they would benefit equally. This un-American principle would discourage thrift.

The proposal would place a burden on industry which industry does not create. Occupational diseases should be charged against industry. All others, and especially the three big ones: Tuberculosis, Pneumonia and Typhoid Fever, are chargeable to public indifference and

to private shiftlessness, neglect and ignorance. By making industry carry that private burden a preferred class of employees would be created—the young, robust and unmarried man. A handicapped class would be created—married men with families, all men past middle age, all limited service men. No employer would select men whose cash compensation, or medical and hospital service would be expected to cost more than the average of preferred class.

A discussion of details is endless. In Germany after thirty-six years it is still going on; changes are now being made. Physicians there have been making professional calls at eight cents per visit and living on their incomes. To do that necessitates many visits. Many pieces of work at small remuneration cannot make for professional advancement, the ideal of the professional conscience is much consideration and exhaustive inquiry for the individual case. Our chief value in this matter lies for the present in dispensing advice which rings true to basic principles of economy, of government, and of our Constitution. Our best personal interest rests upon the well-being of our clientele.

REFERENCE.

1. Constitution: Art. 5. "No person shall be deprived of life, liberty, or property, without due process of law; NOR shall private property be taken for public use without just compensation."

Art. 14. Sec. ONE. "No State shall deprive any person of life, liberty, or property, without due process of law; NOR deny to any person within its jurisdiction the equal protection of the laws."

2. Report of the Wisconsin Special Committee on Social Insurance: page 18.

3. Report of the Wisconsin Special Committee on Social Insurance: page 12.

4. Estimate of the Insurance Economics Society.

5. Six New York physicians connected with large employers of labor compute that 8 per cent would be rejected because of physical condition. Two per cent would be over 55 years of age and be rejected by carrier associations. W. G. Curtis, Dec., 1916, before the Association of Life Insurance Presidents, New York City.

THE COMMUNITY HOSPITAL TRAINING SCHOOL. PRESENT CONDITIONS.

J. G. R. MANWARING, M.D.,
FLINT, MICH.

Along with the changes of many kinds which have developed in our labor situation, is the shortage of nurses. The training schools are having difficulty in obtaining pupils and as a result, the lack of graduate nurses will continue for some time, probably a number of years. The causes of this rather acute condition no doubt are several, but only one will be touched upon in this discussion.

There is also a great demand for partially trained nurses with practically no organized effort to meet it. Those we have of this kind

are poorly trained with no foundation upon which to build, and being therefore prone to accumulate superstitions and practices not good for patients and irritating to doctors. The lack of sufficient graduate nurses and the need of partially trained nurses must be cared for.

THE TRAINING SCHOOL.

Upon analysis the hospital is not primarily interested in the nurses as pupils to be educated but as a source of cheap labor.

Historically the first need was to get the patient cared for and to obtain the right type of women for this purpose and hold them it was found necessary to give them more than what observation and practice alone would teach them. This led to a course of instructions, at first primitive, but gradually improving, especially under the stimulus given by the registration boards, until we dignify this branch of hospital work by calling them "schools" for nurses. Of the hundreds of hospitals in our country, but relatively few of the larger and better could qualify as schools, if we use the term to signify an institution which is sincerely and primarily educational in nature.

The lay board trying to build and organize a hospital always is relieved to learn the way to get one nurse to four patients and not wreck the new venture financially, is to start a training school. Thus getting the quota but paying them a mere pittance in money or not at all.

When the training school is running, a large share of the teaching is by good-natured and practice-shy young doctors who "lecture". They are not picked because of their training for teaching or their teaching ability but because they are handy. If they can teach and will take the privilege seriously enough it is a piece of good luck. Some of the better schools, but not many, are hiring teachers.

The pupils are kept so busy all day long or all night long that they are physically too tired to study effectively or give the lectures more than a passing interest.

If one will consider the present career of a pupil nurse, he will realize that the major portion of her time is given to the repetition of routine work, much of it very ordinary indeed and the technic of which can be learned in a very short time. By cutting down the routine to just enough for the purpose of teaching methods, the whole course as given in most institutions would require but a fraction of the time now taken.

Of course it is realized that the nurse pays for her training in doing this trotting and there are some who think she pays dearly for what

she gets. Nurses quite commonly feel this way themselves after they have gone through it.

Until recently the prices received by nurses for their services when in practice were so much better than other work could give them, that the unattractiveness of such a training did not deter them. Now, when with little or no training, the wages received by women in factories are as good or better, it is more difficult to secure girls willing to face 3 years of this kind, knowing they will be paid less than factory hands afterwards.

It would seem that some changes must be made.

PROPOSED TRAINING SCHOOL.

In an effort to further adapt our school system to the making of useful citizens, all progressive cities now are rapidly introducing vocational training schools and it is suggested that these schools take over in part the training of nurses. This is already a successful feature in some city schools.

The linking together of the community hospital and the community vocational school could be made most advantageous. A brief outline of such a scheme will be given only as a suggestion for a more careful development of it.

The didactic and laboratory work should be given in the vocational school by trained teachers hired for the purpose. The erratic teaching of picked up physicians should be done away with. This will be a relief to the hospital and the work will be better done.

The practical work should be given at the hospital. The pupils should live outside and not room and board in the institution. This will further relieve the hospital.

Two hours daily of instruction at the school and four hours a day at the hospital would give a course which could be made worthy of an educational institution. The four hours of instruction would not drive the pupils to exhaustion and render the two hours of instruction a bore to them, nor would it be asking too much of their time in payment for their training.

In one year good partially trained nurses could be developed by such a course with more than the present curriculum of our state board now requires.

Such a course could be made an ideal one to make better home builders of the future wives and mothers.

For those who want to follow the profession of nursing there could be a finishing course in practical hospital work of longer hours which

would give the poise, self-confidence and judgment that constant practice alone can give. Such pupils could be utilized as night nurses, ward supervisors, instructors, etc., in earning their R. N.

The hospital work by the outside pupils should be from 7 A. M. to 7 P. M. Patients can be prepared for breakfast and operations after 7:00 as well as before and they will all benefit by the chance to rest which is now so often denied them by early hours.

After 7:00 P. M. nothing but emergency work should be done.

The curriculum requirements of the Michigan State Board of Registration for Nurses amounts to a total of 341 hours. It could be all given if necessary in less than a year under such a plan.

The training should be broadened to adapt it to the wider scope and the usual vocation school method adopted of teaching by doing things. The work the vocational school could do can only be indicated. As will be noticed particular attention is given to practical courses for those who will not follow nursing but which obviously are of use to every woman and which the school or home at present rarely gives.

The relationship of a nurse's training and a housekeeper's training are very close. Every study has a practical interest for the home. For instance there is no better training for the preservation of food by canning or otherwise than a practical knowledge of bacteriology and asepsis.

A nursing curriculum as amended could be about as follows and the hours approximately as given:

Subject	Hours
Anatomy and physiology	40
Diseases, accidents, etc.	80
Bacteriology	15
Hygiene, sanitation, public health	40
Dietetics	36
Chemistry, drugs, poisons	30
Nursing	80
Housekeeping	80

The courses should include practical instructions in a variety of subjects such as the use of the thermometer, massage, first aid, bandaging, preparation of dressings, dietetics, home decorating, house planning, budgets, marketing, heating, ventilating, cleaning, etc.

In arranging for this work and fixing hours it must be remembered that vocational schools keep long hours. The Cass Technical High School of Detroit is open from 8:00 A. M. to 10:00 P. M., six days a week, the year around. It is suggested that the courses could be given in three sections divided about as follows:

1. School	8:00 A. M. to 10:00 A. M.
Hospital	11:00 A. M. to 3:00 P. M.
2. School	1:30 P. M. to 3:30 P. M.
Hospital	7:00 A. M. to 11:00 A. M.
3. School	10:00 A. M. to 12:00 A. M.
Hospital	3:00 P. M. to 7:00 P. M.

The courses should run six days a week and Sunday could be cared for in a number of ways.

ADVANTAGES.

Such a course would replenish a failing source of cheap help for our hospital which would be paid for by giving a desired training in a business like and attractive form. It would be fair to the pupils. The instruction would be better. More people would become interested in the hospital, bringing the community and the hospital nearer together.

It would provide a system of getting a large number of good partially trained nurses, office girls for doctors and dentists, assistants in welfare nursing, industrial nursing, school nursing, etc.

It would provide a system for getting trained nurses and better trained ones.

It gives dignity to the training school, making it a real educational institution instead of a side issue to hospital work.

The hours of practical work are not so long as to incapacitate for study nor alarm the parents.

The hours of study fit in with the school work.

The pupils do not live at the hospital and while it would require nearly three times the number of pupils fewer nurses would be furnished room and board.

The young women would live at home, not over one meal a day would be taken away from home and not necessarily in the hospital.

Home pupils would be preferred by the hospital and not shunned as often as they are now.

The home influence and control would be as usual and younger pupils could be used than at present.

There would be no night work for pupils unless they continue their training.

The hospital administrative forces would be relieved of much of their teaching work.

The direct and strong appeal of a training of this kind with its utility, its fairness, its attractiveness and its possibilities as an ideal course for housekeeping should win enough support to supply the hospital with help now needed.

It would be another of the means of popularizing preventive medicine, through our educational system and would also help to dissipate the ignorance and dread of the modern hospital.

Minutes of the Fifty-fifth Annual Meeting of the Michigan State Medical Society at Kalamazoo May 25, 26 and 27, 1920

FIRST GENERAL SESSION.

The first General Session of the Fifty-fifth Annual Meeting of the Michigan State Medical Society was held in the First Congregational Church of Kalamazoo, May 26, 1920.

The meeting was called to order by the President, Dr. Charles H. Baker, Bay City, at ninety-five, A. M.

Invocation: Rev. J. Tyson Jones, Pastor First Congregational Church, Kalamazoo.

"Let us look to God for His blessing: Almighty God, we thank Thee for this beautiful day and for all the evidences of Thy presence and part in the world in which we live. We rejoice that Thy Spirit is in contact with the human spirit, guiding men into the truth which shall make them free from ignorance and superstition. We thank Thee for the ardor with which men are seeking to understand the laws which will lead to light and science. We invoke Thy richest blessing upon this gathering of professional men and women who are seeking to lessen the ills that afflict mankind. We thank Thee for the light which the great war has thrown upon so many problems of medicine and surgery. We pray that every surgeon every physician and every nurse in our land may, like the Master of men, go about doing good. Bestow Thy blessing upon every hospital in Michigan and in America. May every man in attendance upon this convention go away with the high abilities which are associated with the medical profession; with the glowing sense that it is more blessed to give than to receive, more glorious to serve than to be served. Enable all to feel that truth and love alone can heal. We ask it all in the name of the Divine Physician, who came not to be ministered unto, but to minister. Amen."

ADDRESS OF WELCOME.

Mr. Freeman, General City Manager:

Mr. President, Ladies and Gentlemen: This is a little bit out of what should be my line of activity. The form of government in which I am serving, in theory at least, is supposed to allow the Mayor to make the speeches and kiss the babies and let the Manager go out and put in sewers (laughter), but the Mayor had to go to Milwaukee or somewhere and I have to fill in. Like the boy in the Sunday School class—for several Sundays the teacher had been drilling them in the catechism and one Sunday she failed to notice that the first little boy was absent when she started questioning them. She asked, "Willie, who made you?" and the little boy replied "The dust of the earth." "No, no, Willie, that isn't right, who made you?" Again Willie said, "The dust of the earth;" "No, no," said the teacher, "now think who made you?" "The dust of the earth," said the little boy, "the boy God made ain't here today." (Laughter and applause).

I suppose the speech of welcome to a gathering such as this is more or less a stereotyped affair. Presumably the official in question should tell you about the wonderful community in which you are visiting. I could go on and tell you about the many factories, the tonnage of the paper that we put out,

and the celery we grow, and the other things we manufacture, and how proud we are of our schools and Churches and other institutions, but I am not going to do it. I think if you are here for two or three days you will find out those things for yourselves and appreciate them better than if I recounted them to you. If any word in passing I might say that might or might not be appropriate here, would be to tell you in the layman's viewpoint, and in the layman's words what I think we are beginning to appreciate, and that is what you men have been doing in the last few years. It seems just a few years ago that all America was enthused with the spirit that only the drum-boats can inspire in people, when we witnessed the spectacle of millions of Americans stepping forth to service and sacrifice to prove that America still lived and if need be could fight, and suffer and die. It seems to me that looking back over those days and over the battlefields of France and down to today that the public is just beginning to appreciate your work in its glory, but that they are beginning to appreciate it as only Americans can appreciate, and to realize that no other men in this country, either singly or in a group, with any greater sacrifice, served any better in France and in this country, or gave more to the service, than did the medical men of America during the last war. (Applause). It was you more than any others that gave to this country the slogan "Carry on!" and as we were passing through that conflict that slogan came back to the men in the factories and the mills, and on the farms, and back to the mothers, and the wives, and the sisters and sweethearts, and inspired them to carry on, and we did carry on and so the war is over.

Is that true? Is the war over for you people? While we have ceased making munitions of war, the war for you people and for many of us is not over. It would be a tragedy for us if it were over,—if we were to let slip the great gain we have made during the last few years. There was never a time when the cry to "carry on" against venereal disease, against tuberculosis, against all the scourges that have sapped the race since time immemorial was stronger than at the present time. So if there is anything to say it is all glory to the work you have done and all power to the work you are doing and will do in the future. (Applause).

There is only one other thing I might add and that is because of my interest in the subject of government. I never like to speak before a group such as this without voicing a plea that you take an active interest in the affairs of your community. I believe that you do, and I know you have recognized more than the ordinary group of men do what it means to have the intelligent and competent support of men like you in government. We still have communities in Michigan who think the Health Officer is on a plane with the sealer of weights and measures. There is going over the country a wave of feeling that should be developed, and that is to make the officials, the State and City officials, realize that perhaps the most important official is the man who stands there daily as the protector and guardian of the health of that community. (Applause). And I say to you that if you will back up your men, then and then only will you get competent men for that position, and then and then only will we be able to make a success of such a man.

I wish you all honor in your visit, and hope that Kalamazoo may be honored again in the future by having you as its guests. I thank you. (Prolonged applause).

ADDRESS OF WELCOME.

Walter Den Blyker, M.D., President, Kalamazoo Academy of Medicine:

Mr. President, Members of the Michigan State Medical Society: As President of the Academy of Medicine it is my privilege to extend a welcome. Kalamazoo has been honored on three different occasions in the last twenty-one years with having been host to the State Society, and we hope it will not be many years before we will be host again.

There recently came into my hands a little pamphlet of ten pages, which constitutes the program of the Thirty-fourth Annual Meeting of the Michigan State Society, held May 4th and 5th, 1899. It was with quite a good deal of interest that I reviewed this little program and compared it with the program of this year. The whole program of the surgical, the medical and the ophthalmological sections was in the ten pages. Some of the essayists are here today but many of them have gone to their final reward. I am going to take a minute or two to read over this program. Some of the topics will bring a smile at the newness of the proposition at the time they were given, and others will be sad because the obscurity of that time has not been cleared up. Many of the things before us today are not considered at all in this little booklet; compulsory health insurance, sanitary inspection, public health nursing, tuberculosis, infant welfare work, and so on, are not considered at all in this little pamphlet of 1899:

(Read titles of papers and names of essayists.)

Those topics covered the program for the year 1899. There was also a committee appointed at that meeting to solicit the Legislature to install a new plan of registering births and deaths. I thought these ten little pages were interesting in comparison with the seventy-odd pages we have today in the program. These men who came in 1899 were welcome to Kalamazoo and we are glad to welcome you men again today. (Applause).

RESPONSE TO ADDRESS OF WELCOME.

President Charles H. Baker, Bay City.

Members of the Society, Ladies and Gentlemen: We have listened to two addresses of welcome which have been very flattering and the nice things they said about us we acknowledge are true. There is no doubt but that the good things that are said about the medical profession are true (laughter). A good many things are said that are not so flattering that are true or not true, according to the viewpoint. The last speaker took occasion to bring up old memories and I was greatly surprised to find that he had placed me by that old program among the members who have hung on and stood by until, like the last leaf on the tree, they should have been blown off. I am aware that this is the last occasion upon which I shall be hanging on the bough. In the future it will be as you gather the leaves in the fall cover up the blossoms that will be present in the spring, so I hope to still be of some use in that direction.

We appreciate the welcome extended to us. The speaker said that Kalamazoo had been honored on three occasions; I would reverse that and say that the medical profession had been honored by Kalamazoo on three occasions. It is always a satisfaction to come back to a place where they gave you a welcome once, and when they extend a welcome a third time you must feel that you are truly welcome. On behalf of the Society I thank the speakers. (Applause.)

REPORT OF THE HOUSE OF DELEGATES.

Dr. Frederick C. Warnshuis, Secretary, presented the report of the House of Delegates. (See House of Delegates Minutes.)

PRESENTATION OF MEMORIAL TABLET.

President Baker: When this country called upon the medical profession to come to the

front they responded, and a few of them gave to the limit of their possibilities. In memory of those few the Society has purchased a memorial tablet which will be deposited in the University of Michigan, and the presentation of this tablet will be made by Dr. Herman Ostrander, of Kalamazoo.

DR. OSTRANDER'S ADDRESS.

The greatest war of all history has just ceased. The most important single factor in determining the issue of that struggle was the American doctor.

It was he who made it possible to place on the field of action in an incredibly short time an army of 2,000,000 red blooded young men sound in body and mind, who when the last thread of resistance seemed about to break brought courage to our allies and dismay to the enemy.

American medicine has been slow in coming into its own. The part it has played in the advancement of civilization has never been given adequate prominence on the pages of history.

History, as it is written for the masses, is largely a record of great events and great achievements, and emphasis is placed on the most spectacular incidents in those achievements to make the record more interesting. Consequently those agencies that served to blaze the way and make great achievements possible have been lost sight of or have not come *prominently to public attention*.

During the construction of the Panama Canal popular magazines were filled with descriptions of the great engineering feats incident thereto, but little or no provision has been made to inform the generations to come that after one of the great nations of the earth had given up this project following the expenditure of millions of treasure and thousands of lives, American Medicine converted the strip of land which had proven a charnel house to the French Nation, into a place safe for human habitation and thus made the construction of the waterway possible.

The part played by American Medicine in eliminating yellow fever, hook worm disease and other pestilences has never been sufficiently impressed on the minds of the masses.

During previous wars the American Army physician has served his country in practical obscurity without that recognition from the government as regards rank and authority that he deserved and that would have made his services the most efficient. He encountered all the dangers of warfare in order that the fighting units might be kept in the highest state of fighting efficiency. But the plaudits of the

multitude went to the fighting units and not to the Medical Corps. Never until the world's war has American Army Medical Service received from the U. S. Government that recognition that it deserves.

That it has proved worthy of such recognition is attested by the *fact* that at no time in the military history of the world has there been brought to a great army, a medical service of such distinguished personnel and such efficient organization. Never has the medical department of a great army placed the personnel of its men on so high a plane of mental, moral and physical efficiency and this was accomplished by thorough elimination of the unfit by scientific classification that placed every man where he could be of the greatest service, and by establishing proper standards of living.

Never were the wounded and sick so intelligently and scientifically cared for by surgeon, internist and specialist.

We have met at this hour to pay tribute to the memory of four of our number who have died in rendering just such service during the world war—

Major Victor Clarence Vaughan, of Detroit.

Lieut. James A. McQuillan, of Jackson.

Major Asa C. McNrdy, of Battle Creek.

Lieut. William L. Miller, of Saginaw.

Our hearts go out in sympathy to the families of these men in this hour. Our tears mingle with theirs. Their sorrow is our sorrow. Their bereavement is our bereavement. Yet, in the midst of our grief, there wells up within our soul a feeling of pride that when the last call came—in this greatest of all world crises—it was their privilege to make the great sacrifice in the maintenance of a principle; and that they did their part in placing American Medicine on a plane by itself from which it receives and will receive for all time that respect and homage from the civilized world that it is entitled to.

Members of the State Medical Society—We have sought to perpetuate the memory of these brave boys by having their names and their deeds inscribed on a tablet of imperishable material. It is fitting that this tablet be presented to the great University of this state, an institution that they revered as citizens of the state and loved as their alma mater.

Dr. Vaughan—it is especially fitting that this tablet should be entrusted to your care. Those whose names are inscribed thereon not only paid homage to you as their leader in their chosen profession but they were also included in the closer relationship of master and pupil.

They were not only eager to profit by your every word of instruction and advice, but they felt they sort of belonged to you and they, like all your pupils, were wont to listen for the old familiar greeting from your lips, "My boys."

Words fail me in speaking of the one closer to you than all others, the boy who bore your name, who endeared himself to all with whom he came in intimate contact and who was building for himself in the field of medical science a lasting reputation. Our sympathy goes out to you and yours with all the longing of which the human soul is capable. So in behalf, and at the request of the Michigan State Medical Society I give into your care this Memorial Tablet and request that it be placed in such a location that it will be to us, our children and our children's children, so long as time shall last—a reminder of the principle for which those boys fought and yielded their lives.

ACCEPTANCE OF MEMORIAL TABLET.

Victor C. Vaughan, M. D., Ann Arbor.

My Friends and my Boys: My place before you today is a difficult one. Try to bear with my emotion.

The mobilization of the medical profession of this country for the great war began in 1916. Early in that year the American Medical Association and the American College of Surgeons appointed a National Committee. They appointed state committees, county committees and many other committees, and hours were spent by those committees during the summer of 1916 in canvassing the physicians of this country. Every name in the long list and the qualifications of its possessor were discussed. Men were graded, this man was assigned as a surgeon, this one as an internist, this one as a sanitarian, and long before the war with Germany was announced the Surgeon General of the United States Army had in his possession a classification of the medical men of this country. Then when war was proclaimed he had only to call, and how did they respond? As nearly as we could estimate at that time there were legally qualified practitioners of all schools in the United States, in round numbers, about 142,000. About 60,000 of these we believed to be within military age and qualified physically and professionally. No sooner did the call come than the profession *en masse* responded. It was my good fortune to be Chairman of the committee that had in charge the enlisted of the medical profession in this country. Before the war was over more than 30,000 of the 60,000 that we believed to be of military age and physically and professionally fit were

in the army, more than 5,000 were in the navy, and more than 20,000 were serving the Government on the various draft boards, making up at least 55,000 out of a possible 60,000 and understand the doctor was at no time subject to the draft (applause). The lawyer, the mechanic, the merchant, the workingman went in partly because he had to. The physician went because he wanted to go (applause). The response was the same as that which leads each and every one of you to respond to the call for help, to leave your bed on a cold night to go out cold and hungry to take care of even the poorest in your community. This has been our training, this has been our practice. I do not mean that every one out of the 60,000 that we had picked out as of military age and physically and professionally qualified responded, and I wish here publicly to express my sympathy with many of those who did not respond. During the summer of 1917, as Chairman of this committee in the Surgeon General's office, I had through correspondence or through interviews the souls of many men laid bare to me. Most of the men physically fit and of military age who did not go into service did so for worthy reasons. There were very few who acted from selfish motives. Some were so situated that it was practically impossible for them to respond. However, the number of those belonging to this group who did not respond was more than made good by those above military age who insisted on coming in. I had many unusual experiences. Elderly men came to me and wanted commissions. Frequently I would say, "You cannot have a commission." "Why, can't I have a commission?" they would ask. "You are too old." Then some of them would say, "I have looked up Who's Who and I am two years younger than you!" (Laughter) Then I would say, "Well, I have a political pull and so I got in" (laughter.)

Now what did these men do after they went into service? The Medical Reserve Officer—whatever may be said about him in criticism—he took care, and he alone took care of the sick in this country and the sick and wounded in France. No man has greater respect for the regular medical corps in the army than I, but I stand before you today and say that the service which was rendered, whether good or bad, was almost unanimously rendered by the Reserve Corps. The last time I went over the list of killed and wounded medical officers in the various battles in France out of the list of ninety-seven, ninety-five were reserve officers.

This is no detraction to the regular army officer, because he had other work to do.

What was accomplished? With the mobilization of nearly four millions of men there was not a case of smallpox in the army, and since the war we have had epidemics of smallpox in Chicago, in Toronto, in Detroit and in various other places. Are we not right when we say to the nation, "Place the control of this disease in our hands and we will do as we did in the army, blot it out of existence." During the Spanish-American war out of every 10,000 men enlisted there were 849 deaths from typhoid fever. Out of four million men in our army in the great war the number that I last counted up was about two or three hundred, I do not remember exactly. This out of four millions. And we may say that in no army, even in our own, among our allies or among our enemies did disease hamper, or determine, or influence in any way any military problem and this cannot be said of any important war in the past.

As one of those whose name is on this tablet wrote after the armistice had been signed: "I shall stay in France as long as I can be of service to either the American or the British soldier. It is true," he said, "that an armistice has been signed between our enemies and ourselves, but I have heard of no armistice between disease and men and I am ready to continue my service." As one of the speakers has already indicated, we have been in the war against disease all our professional lives and we shall continue, and we will be able to accomplish in proportion to the power and facilities given us by the nation. We are ready to do, we are ready to serve—that is our life work.

Dr. Ostrander, as a representative of the Medical School of the University of Michigan, I accept this memento of those who gave their lives in honor, I may say, of the medical profession. They fell, but there was not a man in the Medical Corps who was not ready to give his life. Those who deny this chafe for the most part because they could not. Those who could not go to France are sorry because they could not go. Every medical man was willing to make the sacrifice made by these men.

I wish to thank you and the State Medical Society which you represent for this beautiful thoughtfulness of these men. I accept in their names. It will be placed in a prominent position in the halls of the Medical School and it will stand as a constant reminder to class after class that although you give your life in the service of mankind you are not forgotten.

PRESIDENT WORK—A. M. A.

President Baker introduced Dr. Hubert Work, President of the American Medical Association.

Dr. Work: Mr. President, Members of the Michigan State Medical Society, Ladies and Gentlemen: Some day, some time, before a suitable audience when Dr. Vaughan is not present, I will take it upon myself to recount much of the history of his connection with the late war. I was in a position where I knew about it. Knowing him so well, and knowing that the services in connection with the presentation have upset him, I will not touch upon it except to say that Dr. Vaughan, with two other Medical Reserve physicians in the United States, did more to build up the Medical Corps of the Army than a countless number of other men could have done. (Applause) Those three men were called to the Surgeon-General's office early by the Surgeon General. Nothing very important in connection with the Surgeon General's office was passed until those three men had been consulted. It is unnecessary for me to say—you all know that Dr. Vaughan is already known as the greatest man in American medicine in Michigan, and a great many of us believe he is the greatest man in American medicine today. (Applause and cheers).

Mr. Chairman, the officers of the American Medical Association felt very much complimented when you extended to one of them an invitation to speak to the Michigan State Medical Society. This Society, as many of you know was first organized more than one hundred years ago, yet I will submit that no one would see in the faces of these splendid men and women any evidence of deterioration or the decay of time. This apparently is one organization that has grown stronger and is growing stronger with time, and if we could come back in another hundred years and see this Society no doubt we would see one which resembles in size and demands that of the American Medical Association itself.

When the invitation was extended to me to speak to this Association I had the same thought no doubt, that every man has who is asked to make an address of this kind. My mind reverted back to my predecessors whom I had heard speak, and I recalled that some of them would talk upon their own medical or surgical achievements, or a certain operation for cancer, or upon the "first one hundred cases of goitre I have operated:" or what not, but it always occurred to me at the time that that man was advertising himself rather than representing

the medical profession. It is difficult to select a technical subject and speak to an audience such as this of men who represent every specialty in medicine. Those who are interested in the particular specialty being described by the speaker, of course, are much interested and learn much. They learn of what has been done, although they may not learn how to do it. The others, forming the great majority, may not be so much entertained or instructed, and so I attempted to select a subject in which all of you should be interested, and most of you are. I believe that the future of medicine will depend not only on organization, but on the organization of your men.

Dr. Work then read his address. (See original articles.)

NOMINATIONS FOR PRESIDENT.

Dr. C. D. Brooks, Wayne: Mr. President, Ladies and Gentlemen: I sincerely appreciate the honor one has in standing here and presenting the name of one of the members for the office of President. Feeling as keenly as I do, and looking back as I have, and talking it over yesterday with one of the men, the list of presidents—all of whom have served for twenty-five years or more in this Society, not *old* men for the doctor does not grow old any longer—and feeling that the Medical Society was never more in condition than it is today, I realize that it is because the president had had the working qualities of a president with him. I think our Society and our County Societies will agree that it is because we have had representative men in office. We put a man in office and he does our bidding, and if we did not think he would act as we wish him to act we would not wish to present his name for the presidency.

I wish to present the name of a man whom I think you have known for at least twenty-five years. He has worked in this Society in various capacities, and is still working. He is always up-standing for public health and improvement, and he will fight your battles in Lansing against this cheapened medical insurance, he will fight your battles in Washington or elsewhere, and you will find him some little fighter.

As a member of the Wayne County Medical Society and as a member of this Society, I take great pleasure in presenting the name of Dr. Angus McLean for President of this Association. (Prolonged applause.)

Dr. A. W. Hornbogen, Marquette: Mr. Chairman, Members of the Society: I take great pleasure in seconding the nomination of Dr.

McLean. I know my colleagues living on the frozen shores of Lake Superior will be pleased with this election.

Dr. B. M. Davey, Lansing, moved that the nominations be closed. Supported by *Dr. R. C. Andries, Detroit*; carried.

Adjournment to reconvene at eight P. M.

SECOND GENERAL SESSION.

The second general session of the Fifty-fifth Annual Meeting of the Michigan State Medical Society was held in the First Congregational Church of Kalamazoo, May 26, 1920.

The meeting was called to order by the President, *Dr. Charles H. Baker, Bay City*, at eight-thirty P. M.

ANNOUNCEMENTS.

Dr. J. D. Brook, Kent, called attention to the fact that one of the conspicuous features of this year's meeting was the absence of one of the oldest members of the Society, *Dr. J. Henry Carstens of Detroit*. He had been in attendance at every State Medical Society meeting for he did not know how many years, and was known as "Dad Carstens" to most of the members. Because of physical disability he was unable to be present this year.

Dr. Brook moved that the following night letter be sent to *Dr. Carstens*:

"The Michigan State Medical Society in General Session assembled at Kalamazoo extends to you its hearty greetings and sincere wishes for your speedy and complete recovery. The members all miss your smiling face, your words of cheer, and your honest plea for the alleviation of human suffering."

Seconded by several members and unanimously carried.

Music—Ladies Quartette from the Normal School.

President's Annual Address—*Charles H. Baker, Bay City*.

(See Original Articles.)

Music—Ladies Quartette from the Normal School.

Address—*Dr. Frederick R. Green, Secretary of the A. M. A. Council on Public Health Education, Chicago*, delivered an address entitled "The Profession and Compulsory Health Insurance." (See Original Articles.)

Adjournment at ten-thirty P. M. to reconvene in Special General Session at nine A. M. Thursday.

THIRD GENERAL SESSION.

The third General Session of the Fifty-fifth Annual Meeting of the Michigan State Medical Society was held in the First Congregational Church of Kalamazoo, May 27, 1920, immediately after the adjournment of the Special General Session.

The meeting was called to order by the President, *Dr. Charles H. Baker, Bay City*, at eleven-fifty A. M.

Report of the House of Delegates.—*Dr. Frederick C. Warnshuis, Secretary*, presented the report of the House of Delegates.

Announcement of Ballot for President.—*Dr. Walter J. Wilson, Wayne, Chairman of the Nominating Committee*, reported that there had been 543 votes cast for *Dr. Angus McLean* for President of the Society for the ensuing year. (Applause).

Introduction of President Elect.—President *Baker* appointed *Dr. D. Emmett Welsr, Grand Rapids*, and *Dr. Wm. T. Dodge, Big Rapids*, a committee to conduct the President-Elect to the Chair.

Dr. Baker: (Presenting gavel to *Dr. McLean*) I have the pleasure of introducing to you your new President, and of presenting to him the badge of his office and the lock which will hold him to his job.

Dr. Angus McLean.—I thank you for this compulsory honor (laughter). I believe I had no opposition so the election was compulsory.

I have not much of a speech to make, but there seems to be a good reason for keeping this organization together. That has never been better demonstrated than this morning. I don't know where this 'compulsory' came from. Somebody said from the Roman Empire, but I don't think they had anything to do with it (laughter). I might think it came from some member of the profession. The medical profession is the important profession of this great world. Any fellow who has a scheme to get through has to have it connected with the medical profession. You would not get a soldier to go to war if there was not a strong Medical Corps. You cannot get any sort of an insurance through, I don't care what kind, without having to come to the medical profession. The organizers of this scheme of compulsory health insurance went first to the State Legislators and then to the American Medical Association, and as the man says it is bound to come why not let it come? He wants us to get a brass band and go over to the shores of Germany and welcome it (laughter). If it comes we will

take care of it—we have taken care of lots of things. If you need anything else as proof of this I will just point to this little tablet, our Memorial Tablet, and say “that was voluntary, not compulsory.” There was nothing compulsory about it. At the time this system was introduced into Germany their mark was worth twenty-four cents and it’s now worth two-and-a-half cents. Somebody spoke of Lloyd George investigating compulsory health insurance in Germany in three weeks. The Kaiser is now in Holland investigating compulsory retention (laughter and applause). I think we have nothing to fear that originated in Germany. I think if we present a bold front and keep the organization together we can take care of anything that comes along. I think it will not revolve to the medical profession. They have to go in a very good order before any legislature will adopt it. I hope the organization will keep together and fight this thing; publish all this in the State Journal and everything else we can get, and I hope our friends from Ohio and other states will be in a better humor. (Applause).

Motions and Resolutions.—Dr. Herman Ostrander, Kalamazoo, called attention to the fact that Dr. Henry B. Baker, the founder of the State Board of Health, died on Easter Sunday. It seemed to him that some recognition of Dr. Baker’s services should be expressed by the Society. It was too late to formulate and offer resolutions for adoption at this time but in order that there might not be unnecessary delay, Dr. Ostrander moved that the Chair appoint a committee to formulate such resolutions and as soon as they were drawn up publish them in the State Journal without waiting for action by the Society. He further moved that the Secretary be requested to send at once a letter of condolence to Dr. Baker’s family. Seconded by several and unanimously carried, and so ordered.

Dr. C. J. Ennis, Sault Ste. Marie, moved that the Society extend a vote of thanks to the visiting gentlemen who had taken part in the program of the Special General Session and of the General Session on Wednesday night. Seconded by several and unanimously carried.

Dr. A. W. Hornbogen, Marquette, moved that the Michigan State Medical Society extend a vote of thanks to the Kalamazoo Academy of Medicine for their fine entertainment and for the success of the meeting. Supported by Dr. C. D. Brooks; carried.

Dr. J. A. Wessinger, Washtenaw, moved that a vote of thanks from the Society be extended to the retiring President for his services dur-

ing the year and throughout the meeting. Supported by several members and carried unanimously.

Adjournment *sine die* at twelve-fifty.

SPECIAL GENERAL SESSION.

A special general session of the Fifty-fifth Annual Meeting of the Michigan State Medical Society was held in the First Congregational Church of Kalamazoo, May 27, 1920.

The meeting was called to order by the President, Dr. Charles H. Baker, Bay City, at nine-thirty, A. M.

Report of the Committee on Civic and Industrial Relations.—The report of the Committee on Civic and Industrial Relations was presented by Dr. Guy Johnson, Traverse City.

Telegrams were read from Mr. John B. Andrews, Secretary, American Association Labor Legislation, New York City, and Sir Francis Neilson, Chicago, expressing regret that they were prevented from being present to take part in the program.

Subject for Discussion.—COMPULSORY HEALTH INSURANCE. (See Original Articles.)

Negative.

COMPULSORY HEALTH INSURANCE A MODERN FALLACY.

EDWARD H. OCHSNER, M.D.,
CHICAGO, ILL.

DR. OCHSNER: Mr. President, Members of the Michigan State Medical Society, Ladies and Gentlemen: Every time I attend a meeting of this kind I feel that I take home more than I give. I hope it will be the same in this instance, but in order that I shall take home something you men must discuss the papers and bring out new thoughts. I have studied this subject for some twenty years and have yet to hear one argument for compulsory health insurance that will hold water. I have looked in vain for one single argument that will hold water. However, there must be some arguments in its favor, and if I can take home a single one that will bear careful scrutiny I shall be more than repaid for my visit.

Dr. Ochsner then read his address. (See Original Articles this issue.)

DISCUSSION.

DR. VICTOR C. VAUGHAN, Ann Arbor, Michigan. Mr. President Fellow Members: I am dreadfully disappointed that the proponents

of compulsory health insurance are not here, and am greatly pleased with what I consider the good sense of those who are here, that they oppose it. It seems to me that this has passed the stage when there can be any special theoretical consideration. Germany has had compulsory health insurance for a great many years, as we have been told this morning. Other European centers, Austria, and Dr. Ochsner says Denmark has adopted it, and England has more recently adopted it. Now what has been the result? Let us take infectious disease just for a moment. Up to the beginning of the war, I don't know just what has happened since the war, Asiatic cholera has not been kept out of Germany. Time and time again it has been found there. In our own country there has been no cholera since 1883; although cholera has repeatedly knocked at our doors it has not gained admission. I will return to that in a few moments. Another thing, when we got into the war editors of journals, magazines, and sometimes newspapers sent to the Surgeon General's office a number of articles now and then in most of which the writers of these articles extolled German medicine, both curative and preventive, and condemned our own. They pointed to the great superiority of German scientists. Most of these letters were referred to me and I took great pleasure in attaching my opinion to these articles and returning them to the editors, but I never saw them printed (laughter). I simply recalled to them that at no time in the history of their country, or of the world so far as that is concerned, has the death rate been anything like as low as it has been in the United States of America. Now, after all, that is the final test. We may argue about morbidity here and there and about mortality here and there, but in Germany where compulsory health insurance has been in vogue for a long while, the death rate has never approached in lowness the rate in this country. Now I am glad to see that there is universal disapproval of compulsory health insurance in this country. I do not think it has a leg to stand on. As Dr. Green so ably showed us last night, it is not insurance, it has no health problems connected with it. It is simply an attempt to improve the outlook of labor and it originated not with a laboring man but with the man of all men who is most antagonistic to the laboring classes.

I want to say that it struck me that the papers that have been read this morning were excellent. They were inspiring papers, but if I caught Dr. Ochsner rightly it seems to me that he has gone

a little too far. I understood him to say in his splendid English—and I admire the way in which he martialed his arguments—I understood him to say that practically every advance in medicine had been made by volunteer or independent practitioners of medicine. If he did not say that it must be my poor hearing that is to blame. I wish to call to your attention that I think that we do not realize what we have here in this country, notwithstanding our political corruption, and I believe everything Dr. Ochsner has said. I must admit that he has had better opportunity to observe it than I, living in Chicago as he does. (laughter). I sometimes get dreadfully discouraged and wonder whether our Government is a failure or not and I do not realize that if man in the mass moves far enough you have to take a different viewpoint as the years pass. I am much older than Dr. Ochsner and so far as federal politics is concerned, I had something to do with the organization of the Medical Corps of the Army in 1898 and I know how rotten it was. The Congressmen and Senators insisted on this man and that man being made officers and so forth. I do not mean to say that these things have entirely disappeared now, but conditions are very much better. During the recent war there was a doctor in Ohio whom I knew about, who was of rather doubtful professional repute and who wished to be commissioned and wanted to be a major. He wrote and came in several times and one day he came in with the air of "I have you now" and said, "I have a letter from my Congressman." He handed me the letter and I opened it and it ran like this: "This man is from my district. He says he voted for me; probably he did. He thinks he ought to be commissioned and thinks he ought to be a major. Don't let him bulldoze you. Do what you think best." (Laughter and applause) But there are more serious things in the Surgeon General's office.

I am inclined to think that these gentlemen in their zeal have hit some things that are of great importance. Now, my dear friends, we enjoy comparative freedom from illness. Do you know how that is done? Take Italy, for instance; I went there when cholera was present in all their cities. I spent weeks in the cholera-stricken cities and I watched how cholera was kept out of the United States. We had in Genoa and Naples officers of the Public Health Service and everybody wanting to come to America was kept under observation for five days and then thoroughly disinfected and not allowed to bring any fruit, and I got on the

boat and came with those men coming from the cholera infested parts. I traveled first class but watched the steerage and made examinations all the time, and we reached quarantine station with about thirty or forty cases of cholera and cholera contacts on board. The stools from thirty-four thousand people were examined that summer and from fifty cases of cholera that were detected not a single one got in. Why? Because the Public Health Service prevented it (applause). Now, when you strike compulsory health insurance you can't strike too hard, but don't give all the applause we have to the private practitioner in medicine. He has done a great many things but we must be careful to recognize the fact that preventive medicine has played and is playing a very important part. It is true that most advances in curative medicine have been made by private practitioners, but I have only to call your attention that when we condemn government medicine, as I understood it to be condemned, we must remember the people who kept the plague out of this country. In New Orleans, where I went a few weeks ago, the most interesting thing I saw was the laboratory of the Public Health Service which I visited. That morning twenty-seven thousand rats were brought in from the nine thousand traps set in the city and every rat was examined carefully. That is what our Public Health Service is doing for us, so don't say that all the advantages and all the benefits come from the private practitioner and that none of it comes from government health officers.

Now I did not get exactly what the other doctor said about Vaughan's ideas but it makes no difference about that. He read a splendid paper and I don't know whether he was criticizing me or praising me (laughter). He called attention to a matter which is of very great importance and his quotation showed what all of us who read history know. This is not unusual, it has happened time and time again, over-urbanization. That is what killed Italy and the Roman Empire, and that is what is threatening us today and there is only one thing that would drive the people back to the country, only one thing. You may say all you like, use every argument, but there is only one thing to drive them back to the country, and that is the scarcity of food. There is every inducement today for the young man to go to the city. Every inducement, I care not what his ability may be. The New York Board of Health had a few years ago a very striking chart. They began I think about 1890 showing the death

rate of children under one year of age born in rural New York and those born in New York City. When those charts were begun the chances of life for the child born in rural New York were greatly superior to those of the child born in the city of New York. Those things have changed and the last time I saw the chart the chances for the child born in the slums of New York City were greater than for the child born in the rural districts. There is no reason for the people to go back to the country unless they can go back under proper hygienic conditions. Take tuberculosis, we think it is a disease of urban life, but it is a disease of homes. In Ireland the death rate from this disease is higher than in England. It is the housing and we should try to do all we can to make for the rural districts the same conditions of living that the people have in the city. Take the city of Chicago with a death rate of 1.5 per one hundred thousand from typhoid fever. There is not a rural community, I dare say, I have not looked it up, that has so low a death rate from typhoid. I know that in New York state the lines of typhoid fever in that city and the country have crossed, just as the other lines have crossed. What we are asking for in Michigan is that there shall be the same health service in the country that we have in the city. Somebody said that was all right with preventive medicine but it must not touch curative medicine. I think in dealing with diseases it is impossible. Then look at it from the standpoint of the profession. What we are urging in this state is that there shall be hospitals all over the state, just as common as the high schools. That these hospitals shall come up to a certain grade and shall have enough beds and equipment to make them first-class, and that they shall have a well-fitted staff, and that they shall be the center not only of preventive medicine but for curative medicine. A bill was introduced a few weeks ago in the legislature of New York state which probably states this better than any I have seen. Now if we have hospitals in every village and have interns and nurses who, when a sick call comes in, if the patient is very sick will take them to the hospital and care for them, the people shall pay in proportion to their ability, and there will be no medical charity. Why should the doctor work for nothing when the grocer and the dry goods man will give neither food nor clothing without pay?

That is the attempt we are making. It is simply to extend to the whole people everywhere and that is the thing we have to offer in exchange for the compulsory health insurance.

Now I am in sympathy with the laboring man. If it ever comes to a fight between the proletariat and the aristocrat I am with the proletariat whatever it may be (applause). I am with the common man; I belong to the common people. I was born a member of that class and I have never striven to rise above it. I live in it—I am a worker and I sympathize most thoroughly with the laboring man that his hours of labor shall be shortened. Still when the laboring man asks for a six or eight hour day law—I say to you that if every able-bodied man went to work we would have all we need to live. Agriculturists tell us that to make the land produce to its greatest capacity, even by crude methods, requires during the summer only 220 hours of work. The trouble is that the essentials of life, when narrowed down, are these: food, clothing, shelter and fuel. There is nothing else essential to life. Money is helpful now and then, but less than 50 per cent. of our population is engaged in the production of these fundamental essentials, food and clothing, without which the nation is doomed to die. It may be a subacute death but it will surely come unless conditions are changed. And gentlemen of the medical profession, it is in our hands more in proportion to our neighbors than any other class of people to help this nation out at this time, and demand for all conditions and all classes of people protection from disease. It is not for the laboring man nor the rich man but to all alike, with no class distinction. We labor for the good of the whole. (Prolonged applause.)

AFFIRMATIVE.

MR. JOHN A. LAPP, L.L.D., Editor Modern Medicine, Chicago, Illinois. I wish to state first that I am not a doctor. Not long ago my little girl, who is just getting initiated into the mysteries of life, was asked "is your father a doctor?" and she said "Yes, he is a doctor," and then after thinking for a few moments she added "but he is not a *real* doctor (laughter). I wish really that the word doctor had been left to the ancient and honored profession and that it was not applied indiscriminately to the class of people, most of whom do not deserve the title of doctor.

I am sorry I did not have a chance to hear what the speakers on the other side of the question may have said. I am inclined to think what I am going to say is not going to be in agreement with what you have already heard. I am in the embarrassing state of giving the contradictory statement direct. I do not know what anybody has said and therefore my state-

ments will have to be taken as in opposition to everything that has been said.

I am a little bit embarrassed, too, because the delegates from this Society are among those who religiously condemned all health insurance at the recent meeting in New Orleans. We are in the position of trying the person after he has been hung. However, the question is still open even though the resolution has been adopted, and it will not down until some solution is provided.

If the ideal which has just been stated before you is ever realized so that all people will receive medical service within their ability to pay that side may be killed by that means. That would be Utopia, but if I may judge from New York and the reception the plan received there I should say that plan is about as far off as is compulsory health insurance itself. If that time comes, and I hope it will, we can well eliminate the medical side from health insurance and consider only the question of providing cash benefits for the man when he is sick and unable to earn. When the man is sick he cannot work; when he cannot work he cannot earn money, but his expenses go on just the same, their obligations must be paid. If a man loses three months, six months or a year it is a pretty serious thing in the life of the average man who is only a few days away from economic distress, as a rule, when sickness hits him. Compulsory health insurance is to smooth out what happens in these cases—it is for many things. No one would go without fire insurance these days because fire is a serious thing for anyone and we have fire insurance to distribute that loss over the whole people. We have accident insurance, we have accident and health insurance, we have liability insurance, we have burglar insurance, we have life insurance and a great many different kinds of insurance to smooth out these things and to make it certain that no calamity shall hit this individual or that individual and drive him down into economic disaster. Insurance is an old principle and the purpose is to apply it to sickness, which is a disaster in the life of any individual but which is not so great in the concrete.

I will prove that the maximum average is nine days lost for each of the workers. If each person averaged nine days of sickness there would be no need of insurance. Everybody could carry his own risk if insurance was on the average of nine or seven days to each individual. But sickness does not fall that way. A few of us escape, the rest bear it all. Sickness falls this way: eighty per cent. escape. In

any year among the great average working class of people twenty per cent. bear the entire burden of sickness for the year, and of this twenty per cent. sixty-five per cent. are sick for less than twenty days; the rest bear the great volume of sickness, a comparatively small number. Eight hundred thousand escape; two hundred thousand are seriously sick; of these one hundred and thirty thousand escape with less than sixty days; therefore, this sixty-five or seventy thousand people must bear the great burden of sickness. Of these forty thousand are sick from four to six weeks, fourteen thousand are sick from twelve to sixteen weeks, three per cent. of this body of working people are sick for more than six months, and thirteen thousand are sick for more than a year. Given a body of independent workers today that is the picture; more than twenty-six hundred will be sick for more than a year, six thousand of them for more than six months, and it is that disaster of sickness which falls to those people that insurance is intended to smooth out and make it fall over all the people so that we can average the sickness existing to those people.

You doctors know what happens to the average man when he is taken sick. What happens in the first instance? He uses up his savings, his credit sometimes; a few men have enough to last them a little while, the great body of people have not. They are in distress within a few weeks and must depend upon someone to give them credit or relief within a few weeks. The next step is the Morris Plan Bank—a great institution which lends them money at a nominal percentage. On investigation we found that a large per cent. of their loans were made to men who are in distress on account of sickness. Where there are no such banks they must resort to the chattel loan and they borrow money at 4 per cent. a month to tide them over sickness. In the State of Ohio we found that 35 to 50 per cent of all their loans were made on account of serious sickness, to tide men over the economic phase of sickness. It is pretty serious when men have to borrow money at $3\frac{1}{2}$ or 4 per cent. a month and that is the lowest per cent. in our cities. If that sickness lasts, imagine the thing that will come to these people. The next resort is the charitable or relief institutions. The great per cent. is given on account of sickness, and in the class that receive public relief the amount is still more; although this is not exactly measured, forty per cent. are there because of the disaster of sickness at some time in their lives. They happen every day and everybody knows they happen and they are

driving men down to lower levels. It is not uncommon to find men who are handicapped for life through sickness at some time in their life. Not long ago a man in England said that he had been so handicapped by sickness that it took him six years to get on his feet from the results of that illness. If there is any way possible by which the cost of sickness can be distributed over the whole body of people so that no one will suffer the disaster of sickness I think you will say it is a good thing. I can't imagine anybody protesting against it; the only thing is that we propose to put it on the universal, compulsory stage, just as we have made the accident insurance. Everyone will admit the social or medical value of distributing sickness by the insurance. Shall we adopt a compulsory health insurance plan? The insurance is already being carried privately. Possibly 2 per cent. of the burden of sickness is now distributed by existing agencies, leaving 98 per cent. to fall upon the individual who happens to be seriously sick. We found that the better class of workers carry some kind of insurance, that usually amounted to from seven to nine dollars a week, without any medical care to speak of. The burden of sickness is not now being distributed. There is no universal insurance in this country except so far as employers have their employes share in medical care. There are many plants in this country that are employing hundreds of thousands of men who are getting the same service and the same plan that it is proposed shall be provided in compulsory health insurance. It is not enough. Eleven states have considered this subject; six came out for it, four against it, and one tentatively accepted it but asked for further time to consider the question. Six states have decided definitely in favor of compulsory health insurance, and a man from the one that investigated and in which they made a very exhaustive report has told me time and time again that the tide was absolutely and completely toward compulsory health insurance but the commission did not look at it from that point of view.

It has been in force in other countries and you have heard about this from the other speakers. They have had it in Germany for forty years, in Austria for a long time, in England just since before the war; in Norway, in Switzerland, and in some parts of France. It is quite universal in those countries and also in Australia, where compulsory insurance beat out the state business. It is quite universal. Shall we consider the principles as applicable to state conditions?

Sickness has the same effect in Germany as in the United States. Men are hit by sickness and go down, perhaps not to poverty, but toward poverty. That is the class we are interested in. We do not care for those below the poverty line. They have to have working capacity and if they have working capacity you should insure that capacity that there they shall not be driven down to poverty. It is a means of preventing people from going down into poverty, from slipping down as we see them slip all the time.

Has it worked well in the other countries? The best answer I can give is that not in the history of any country has there ever been a single backward step taken. Not only that, but every year more is taken to cover the job more completely and better. Is there any better testimony than that for forty years it has been observed and planned, and during these years there has never been a single step backward? That these people like it and would not get along without it? Even now in the German republic, torn as it is with disaster, there has been in the last month an extension to other groups to which it shall be extended.

I have in my pockets three statements which I wish to put in the record. One is by Alfred Cox of Great Britain who says it is quite universal and that in Great Britain the doctors are satisfied with it.

One is a statement from the British representative at the employer's conference, in which he says he has never heard in all his experience, coming in contact with the employers of England, that they think it is a failure or have had difficulty in adjusting themselves to it.

Another is from the editor of a leading trade journal of England in which he says it would be impossible to repeal this act. They said in California when they were there that an attempt to repeal this law in England would result in revolution.

Last week in New Orleans a man who went over to investigate the subject said it was an absolute failure. He made the case so strong he destroyed it in the minds of those men. But immediately following him came a distinguished doctor from Glasgow, who had been sitting quietly and listening and whom nobody knew was there. He came to the platform and courteously but completely refuted everything this man had said, so completely that this man must have felt like thirty cents! This was a man who for seventeen years had been on the examining board of Great Britain and he said the insurance act was not only successful, but that

the doctors approved it and would not think of going back to the old system. That was the statement from the examining board of England and this doctor who had worked for seventeen years on that board. It is no different than it would be in this country if you sent a man here and there in this country to investigate the Medical Workman's Act. You would find in some instances that it was very unsatisfactory. I do not doubt but that in some instances you would find some who still condemn it and say it should be repealed, but no one who knows conditions would say that the Workman's Compensation Act should be repealed. On the other hand, it should be extended and the medical care made more complete. For my part I am satisfied; I am satisfied that that condition would prevail.

As to its adoption in this country. We have not in the proposals made in this country taken any models but have tried to take the experience in foreign countries and work out a bill which would work in this country and have a thorough working plan. If you will examine that bill honestly and completely you will see that in the main the plan that has been proposed in New York does leave private practice just about as nearly as it is now as any plan under the sun could possibly leave it. It is a plan by which we seek to disturb as little as possible the position of the physician and patient. Under it the physician has free choice; he can reject the patient if he does not wish to take the case. He does not serve under a panel but as a private physician and presents his bill for his services on an arranged schedule fee fixed by the medical society, presenting that bill to the insurance company to which this man belongs. The differences primarily consist of the fact that the insurance company pays the doctor when the patient is not in a condition to pay. We must see to it that the profession is protected completely and absolutely because the medical growth depends upon material success. It must. Men must earn enough to live on. How has that scheme worked out? We have adapted those conditions to American conditions and have tried to obtain the best they have today. The plan is working out in this way in most states: the County Medical Society is asked to formulate a plan of medical service and fix a fee for that county and that is presented to a commission with a physician at the head of it. The commission considers this plan that is presented to the County Society. If they do not accept it it is referred back to the County Society, and finally if the conditions are not sat-

isfactory a board of arbitration can be asked for, this board to be made up of five members, two chosen by the physicians, two by the insured people and one by the governor. If there is any way in which justice can be obtained for any body of men in this country it can certainly be obtained by that. First a hearing, then a re-hearing and, finally, a board of arbitration. This takes it entirely out of the hands of bureaus to decide or plan the fee that can be charged. If there are any other safeguards they should be put in, but on serious consideration we have been unable to see anything else that could leave them as they are today. That is the plan in New York and I dare say there is not even one physician in the country who has taken the time to really analyze it and take it home and study it. I have had men get up after reading the bill and repeat the same old thing about a twenty-five cent fee. A man got up in front of me a few days ago and said they had suggested a twenty-five cent fee. I said "Where did you get that stuff?" I know of no one except the Casualty Companies that expect that. This man was in the face of my statement that the fee was two dollars and a half, but that is the type of thing that is going on in this country, and it is an unfortunate thing that the physicians of the country should take that type of testimony instead of analyzing and getting the truth of the subject. Many things have been said, many of them in Michigan. I have read some of them and been somewhat surprised. I have just recently seen a statement from one of your societies asking the American Medical Association to get rid of Rubinow (?) and he has not been connected with that Association for nearly four years. He has been out of this country for two whole years as the head of the Medical division of the Zionist study, and yet in the State of Michigan a resolution was passed condemning the American Medical Association for having him! I am glad that Dr. Andrews could not come today because I can say things I could not say in his presence. If every one of you knew the splendid things that are being done by the American Association for Labor Legislation I am sure you would be surprised. The men who are the executive officers of it are the best and keenest minded, far sighted men in this country. They are employers and labor leaders of all types. Do not doubt this, but take the list and look it over carefully.

It is said that we have one invaluable substitute for health insurance. People say "let us prevent sickness instead of compensating for

it after it has occurred." Of course you do, under any plan that is adopted, want to go the limit on prevention, but prevention is not in any sense a substitute for taking care of the disaster of sickness when it occurs. For after you have done everything that you can you will still have cancers and will still have infectious diseases and degenerative diseases, and people are going to be hit by that calamity. You may prevent twenty, thirty or fifty per cent. in the next twenty-five years and there will be that much less insurance needed but it is not a substitute.

It is said that this is a German proposition. It is said to have been born in Germany. It was not at all. It simply culminated there into one universal system. It had been in existence for several years in other places and when Bismarck was working on that plan he wrote to the Baltimore & Ohio Railroad for information as to how their plan was working out! I dare say you didn't know that but that letter was in existence for many years. It has since been lost but it was in existence for a long time. This plan may have been worked out in Germany, as many things were, but we are not going to do away with all the plans that we get from Germany. Although I really think vocational education caused the war, we are not going to do away with vocational education because it originated in Germany, or with many medical discoveries because they originated in Germany. Not at all. We are going to adopt everything we can in the world. It is a remarkable fact that right down to the moment the war started the flow of physicians from this country to Vienna never stopped. They had health insurance in those countries but that did not destroy them. Dr. Hayhurst said it had the effect of turning the attention of the physicians of Germany toward the study of industrial diseases, and instead of the old type we had gained enormously in industrial medicine and there was great improvement in hygiene, because the workers got sick and if this could be prevented less insurance would be necessary. As far as the observer could see it had no effect except to turn the attention in that way. We went there up to just before the war and we will probably go there afterward if they have anything to show.

It is supposed to be destroying the English profession, but in a recent number of the London Medical Journal it is stated that the English profession was much worried over the influx of young men in Great Britain into the medical schools, because they were afraid the medical

schools would be over-crowded. If this was such a great disaster would the medical schools be over-crowded?

We have been going on satisfactorily, with no great deterioration, no great benefit, and none was expected, except the study of industrial diseases. It has had no serious effect on the medical profession. Those are some of the principal things that have been urged against health insurance. The idea is that it will cost too much and many figures have been brought to prove this. Sickness occurs now and somebody is bearing it; doctors have a great deal of it to bear in charity work, in bad bills. Charity organizations are bearing a lot and individuals are bearing a whole lot, and if the individual cannot bear the burden now what can be done in the future? This is a serious question. It is not one that can be downed by resolutions. It will be before us until some solution is brought forth. No medical group or anything else will ever still it very long. We have provided for medical care and crude as the system is it is being extended right along, step by step, in every state. That same idea will soon begin to be adopted here and there in a large way or a small way, and it will be extended because it is in the genius of the people who think socially. It is bound to come eventually in some form or another, just as surely as we are assembled here, and the only thing I plead is that the medical profession give the earnest, thoughtful attention to it that it deserves, to see if it is going to be harmful to the public they serve, to see how it may be modified when it comes so that the best good may come of it. If the doctors stand opposed to health insurance tooth and nail, oppose it as they did in England right down to the moment of its adoption, they will have little influence when it comes, and that will be too bad because the medical plan should be worked out completely and carefully. The doctor should take the lead on the medical side of this, should understand it fully and be ready to accept parts of it, if parts are acceptable, and not oppose blindly every phase of this question. It is apt to be bad for the people. Honest, careful study and the employers and medical profession working together will bring about a compromise that will preserve the profession in its present dignity and give it the chance for advancement that everybody desires. (Prolonged applause).

REBUTTAL.

DR. EDWARD H. OCHSNER, (replying to Mr. Lapp): Mr. Chairman, Ladies and Gentlemen: I am very glad that Dr. Vaughan

misunderstood me because he has said most of the things that I would have said if I had had the time. If he had stopped about two hundred words before the end I would have agreed with him completely. I said that there had been no addition in the cure of disease by the paid employes of city, county, state or nation, no advancement made by these employes in the one hundred and forty-four years of the existence of the American government, and I repeat it, and I defy any man to prove otherwise. When it comes to the question of prevention of disease that is an entirely different proposition and the minute organized government goes out of its course and tries to treat disease it goes out of its province.

DR. VAUGHAN: How about the treatment of diphtheria?

DR. OCHSNER: It is no better under State control than under private control. In the City of Chicago the City loses more cases than the private doctor. I can prove that with figures. In State medicine the prevention of disease is and must always be the function of the State.

The Public Health Service of this country has done a marvelous service. Walter Reed alone has justified every dollar that has been spent by this country (applause). But in the treatment of disease the thing is quite different. I spent four years in the service of the State of Illinois. The best that can be said of the treatment is that it is mediocre. Nothing for the cure of insanity has come out of its institutions.

I will go Dr. Vaughan one better: I was born in the common people and I hope to die in the common people. He said he hoped he would never rise above the common people. I hope I will never degenerate into aristocracy! (Applause).

Gentlemen, we have heard the bunk for four years that this compulsory health insurance is going to come. Don't believe it! (Applause). It is not going to come in free America! (Applause). Let me tell you a little medical history. Four years ago the Chicago Medical Society appointed a **Commission on Health Insurance**. That first commission went over the American Medical Association, and the gentlemen at 535 Dearborn street said "Get into the band wagon—it is going to come." The first report of that Commission was to this effect: "while we do not believe it is a good thing, the best thing the medical profession can do is to get the best terms you can." On the 11th of December, 1916, the West Branch of the

Chicago Medical Society pulled off a stunt on medical insurance. Nine speakers were invited to take part in that discussion. Five of them gave us the kind of a talk which we listened to just now—I want to compliment Mr. Lapp on it. Three of the men said “It is going to come, let’s make the best of it.” They had invited me because I was President of the State Charities Board, and they thought I should know something about it. (Laughter). I did know a little something, and I said “Gentlemen, it is a mistake; do not believe all you are told.” I told them that it would be the most serious mistake that could happen in American medicine if compulsory health insurance should be adopted. I took the thing so seriously that I wrote to the President of the North Side Branch of the Chicago Medical Society and asked to be permitted to read a paper there. I read the paper and it was published in the *Medical Journal of the State of Illinois* and in the *Public Age*. I think that was the first paper that was published on this subject. Since then men have been thinking, even at 535 North Dearborn street (laughter). I am told that Dr. Green delivered a brilliant address here last evening against compulsory health insurance. I am glad they have seen the light! They will see more the more they study the problem. Dr. Green was one of the ones who formerly said it was bound to come.

I am very glad that Mr. Lapp said we are going to have \$2.50 a call, but I am making a guess that when the bills are paid not one billion but three billion will be required, and who is going to pay it? He says the workers are paying it now. Not that much. I will tell you why. Because under compulsory health insurance the number of calls double and triple. If you give people free medical service they are going to run to the doctor for every little belly-ache (laughter and applause). Let me give you the evidence. In the fall semester in 1914-15 the University of Wisconsin adopted a system of a cross between charity and compulsory health insurance for their students. During the sixteen weeks of the fall semester of 1914-15 the health insurance physician of the University of Wisconsin made seventeen thousand examinations on four thousand able bodied men and women in that University. Do you imagine that they needed that many calls? They got them because they did not have to pay for them. This is authentic; I heard the Dean make the statement to the Legislative Committee. When I made the statement before that Commission at their request they said “Doctor, that is im-

possible; that cannot be true,” but a good old senator replied, “Yes, Mr. Olds, it is true, I heard it with my own ears.”

The cost of paying for the American people will be stupendous if they are going to run to the doctor for every little ache and pain. What does the doctor do? Does he sit down and tell them that they must live so and so and so and so in order that they will not be sick? No. No, he writes more and more and more prescriptions for medicine, and the result will be that the medical factories will have a hard time making it (laughter). I was for five weeks assistant to the panel physician in Leipsig and those people came for every little bit of a thing. It was an ear, nose and throat clinic and they came for every little blooming thing that they would not come for in America. They came because it was free and they were getting two-thirds pay while they were not working!

Mr. Lapp told us that the average sickness was nine days in America, but he did not tell us that while the average was 11 per cent. in Germany before compulsory health insurance it rose to 15 per cent. afterward. That part he did not tell us. Why? If it is the thing we want it should reduce the morbidity and mortality. If it does not do that it is no good. That is the test of the whole situation, and it does not do it. I have heard many proponents but I have never heard one of them say, and give the evidence, that compulsory health insurance has either reduced the number of sick days or reduced the mortality. I have had them *try* to explain why it does not do it.

There is another reason why it increases the number of days, and the principal reason, and that is malingering. I see some elderly gentlemen here in this audience; I wonder whether they have ever known before that there is a crisis in practically all diseases in countries where there is compulsory health insurance? (Laughter). We have been taught that there is a crisis in pneumonia along about the ninth day and in typhoid fever about the twenty-first day, but is it not a strange medical fact that in countries where they have compulsory health insurance most of the people get well on the seventh day? This is because there is no insurance for less than three days. A certain number get well on the second or third day, a few on the fourth, but a very great many on the seventh. It is strange that this should have such an effect upon diseases in countries where there is compulsory health insurance and where there is not. Let them explain away that fact.

A gentleman down in Washington who sits in a swivel chair, who has sat there for many years—I think it has a cushion on it. (laughter) This man wrote a paper in which he states that malingering is a negligible quantity. It is a very scholarly paper and as the author is in government service it is authentic! (Laughter). But do not believe all you hear from bureaucrats. Several years ago there were two rival schools, medical schools, in Chicago; Rush Medical College and the Northwestern University Medical School. The registrar of Rush Medical College was one day engaged in an argument with a student who wished to get back his registration money because he had decided to go to the other school. In the midst of the conversation old Dr. Gunn, who was the treasurer, walked in and said "What does he want?" The registrar said "He wants his money back. He has gone down to Northwestern University and the only reason he can give for wanting to make the change is that they have cushions on their chairs" (laughter). "Give it to him," Dr. Gunn said, "give it to him. If that's the direction they get their information from we don't want him. We teach through the head!" (Laughter and applause.)

Mr. Lapp has told us also, I am pretty severe here, but don't think it is personal; I have the highest regard for both Dr. Andrews and Mr. Lapp, Mr. Lapp has said that in all Europe there has been no step backward, and that they like it. Why not? If you get that thing fastened on a country there *can* be no step backward. There are so many men in the employment of the state and they will keep blowing the horn so hard that you can't say a word about it! (Applause.) Lloyd George went over to Germany (he was so hard pressed that he had to have some scheme) and spent three whole weeks studying compulsory health insurance through an interpreter! (Laughter.) He went to the heads of departments and asked "How is the scheme working?" And of course they told him "It is lovely, it is splendid, it is the Utopia on earth. I make forty marks out of it and the doctor down here is getting twelve marks," this last as an aside. I did not do that. I went to Germany and I wore German clothes, and I wore a German moustache (laughter), it was not much of a moustache but it answered, and I talked the German language. I spent many months there and I lived among the people and never slept a night in a hotel. I spent seven months in Italy and never slept in a hotel. I spent several months in other places and spent my time among the people and they did not

know I was an American physician. I didn't let the eagle scream on every occasion (laughter) I'm proud of that eagle, he's a grand bird, but there's no use overdoing it! I went to Europe a good American and I came back a ten times better American (applause). I went to Europe with six hundred years of ancestry behind me that hates paternalism, and I'll do everything I can to defeat paternalism, in this great country of ours!! (Cheers and prolonged applause.)

MR. LAPP (in response to Dr. Ochsner): Mr. Chairman, Members of the Association: I should like to answer that last proposition first, but think I shall take things in their exact order.

I am greatly chagrined and surprised to find that Dr. Ochsner is condemning a system which encourages people to come to the physician for care as quickly and as often as possible, and you can't have preventive medicine unless that thing is brought about. He condemns in Wisconsin the very thing that our belief in preventive medicine has urged, giving them the chance to come. I wonder if Dr. Ochsner has learned that the very thing that was adopted in Wisconsin, at which time the students paid \$6.00 a piece and got medical care during their time in the University, has now been adopted by many of the universities in the country? The system which he was condemning in Wisconsin is now pretty well adopted in all universities, California, Yale, Harvard, Princeton, and several others and if they haven't it this year they are planning to get it right away. I think as a layman I would like the opportunity of going to a physician when I feel I need to, but I know I would not be likely to go to a physician until I really needed to do so. I am not an amateur reciting facts that somebody has told me. For two years I did nothing but think plans and study plans in Ohio and throughout this country. I think I have examined every state ment that has been made on the subject of health insurance in our language and I believe I have studied every side of the question and I have heard for years that you can't get people to come to the doctor under any circumstances. They will not come quickly enough even if they have a chance. So if there is any scheme under health insurance that will bring this about I say it is a Godsend that will bring them to the doctor when they are getting sick. It is nothing less than preventive medicine.

I am surprised that Dr. Ochsner should refer to the cost question. It is so simple. It is costing us that much now and this is a plan for distributing the cost over all the people,

and if it is too great for all the people what does it mean to those few people who are bearing it now? In New York each local group or local geographical group run their own affairs for themselves, just the same as scores and scores of plants are now doing. Up in Milwaukee the light people have the same plan that is being enforced in health insurance, with a plan for paying these men and their families when they are sick, and it is working very successfully. They have no trouble with people running to the doctors before they are sick, not the slightest. I was told yesterday that the Tennessee mining people provide special care for their employes and that it was working successfully. They are not worried about people coming too often for medical care. I should think Dr. Ochsner's argument was the very thing I should advance if it will bring about the plan that he desires.

The doctor referred also to the loss of time in Germany. I do not know where he got the idea that there was 10 per cent. before and 15 per cent. afterward because those facts are not true. The truth is that the sickness has been decreased but new diseases have been added to the list from time to time. When Dr. Ochsner was over there twenty-five years ago the scheme was in its infancy. They had not advanced the scale to agricultural workers. It was a minor thing, but since then the length of payments have been increased from thirteen to twenty weeks for each sick person and it has been extended to more and more groups of people. It has slightly increased the aggregate sickness but not the individual sickness. The average loss today is 8.6 per cent.; this instead of 15 per cent. as quoted by Dr. Ochsner. I want to get rid of this, it is one of the stock phrases. I do not ask you to take my word for it. Look the facts up and see who is correct. I know where I got my figures and what they are and you can find the source of them. It is a matter of testimony. If you do not take Dr. Ochsner's you need not take mine, but look the matter up.

The Doctor is much concerned about malingering and about the "swivel chair" man in Washington. (Laughter). I don't know who it is unless it is Mr. Frederick Hoffman and you will probably admit that Mr. Hoffman is not a swivel chair man. He is on the go all the time. He said last summer that this was all a myth, this idea of malingering. Mr. Meeker, who comes in contact with this as much as anybody, says it does not exist. If you will study Sir John Collie's book you will find that this is just a bugaboo that has been stirred up to

frighten people. Collie said after his book was written that if he had it to do over again he would make it stronger, because he has found that many things he thought were malingering were not. Of two thousand cases that were sent to him as a consultant on malingering less than 25 per cent. actually were malingerers.

I did not understand what the Doctor said about getting well on the seventh day. We have lots of schemes for health insurance in this country; we do not have to look to Germany or anywhere else for the plan. We have many cash benefits, but we have no "seven day" sickness. There may be some cases where a man will by remaining sick another day get a full week's salary, and so remains off the list, but that is the fault of the organization. All the plans that are worked up properly have no problem in this regard at all.

Dr. Ochsner stated that you cannot get out of this scheme after you get into it. Perhaps they couldn't in Germany in the old days when the government controlled. Perhaps they can't yet. But I have never seen a plan under a democracy that you could not get rid of. I have never seen a plan that was working so rottenly as you say this is that you cannot get rid of. You have to prove that it is rotten, and its bad influences must be seen.

The Doctor also made some factious remarks about Lloyd George going to Germany for three weeks. You know that in England the only opposition was by the doctors and they were not politically strong in Great Britain then, and they have since remarked that they were glad to get away from the old system. Students from Great Britain had been in Germany for years. Students from this country had been in Germany for years and there was scarcely one, even of the men who are now opposed to it—like Frankel, Hoffman and others, but what came back here enthusiastic for the system, Hoffman came back and said it was a good thing and everybody liked it. I am not quoting a proponent but a very bitter opponent.

Again, I do not know what the Doctor means by paternalism. If government is paternalism, if socialism is paternalism, I am for paternalism. There is no such thing as paternalism in a democracy. Paternalism is where the ruling class, like the Kaiser, is imposing things on other people but that does not exist in a democracy and cannot exist (applause). It is wrong to call a plan which is socially organized, a plan for all the people, paternalism. It is not paternalism, not in any sense or any way, and it is a confusion of thought to have it advanced

as paternalism. We are never going to have health insurance in this country until the people approve it (applause). They did not approve it in California and they have not got it. For the time being California has fought it down for the people in this country will not have it until they approve it, and when they do approve it it is a democratic action and not a paternalistic action.

As to whether or not this is coming, that is a matter of opinion. I have a very good opportunity to observe the thing throughout the country. I am not looking at it from the standpoint of New York, or Michigan, or Ohio, or any other one place. I have been engaged for years in a form of legislating and know how the forces work, and I know how they pass legislation, and I say to you that this sort of thing is the thing that meets the approval of the people, because it provides for mutual benefit. It is going to come. Perhaps not in the form that is now proposed, but it is going to come. I leave that as a mere matter of statement. I have no assurance that health insurance is an inevitable policy in this country. But it is coming and I hope that when it comes it will come with the full co-operation of every agency, that it will be worked out most simply, and that the whole plan when it goes into effect will do the job that we want it to do. Namely, to provide for cash benefits for the man who is disabled and hit by sickness, and to provide just as adequate medical care as the profession can give, and to provide for the medical profession just as complete a plan of work as can possibly be provided. If you can work that out so that it brings these things to pass it will be to the great good of the State of Michigan and the great good of the medical profession. (Applause.)

DR. GUY L. KIEFER, Detroit: Mr. Chairman, Gentlemen: We have certainly had a great many talks on compulsory health insurance and have heard both sides discussed. We have been told that we have not studied the subject well enough to pass resolutions such as have been passed by the House of Delegates condemning compulsory health insurance. We have been shown that compulsory health insurance will do what it is supposed to do; namely, increase the efficiency of the worker by reducing the sickness among the workingmen. I have thought about this a great deal and it has seemed to me that the thing proposed by Dr. Vaughan is what they are trying to reach; namely, an extension of public health work. You who heard Dr. Green last night talk along the same lines. It seems to me that

we will get further if we ask for a committee to study the question before it is presented to the Legislature, and I will take the liberty of presenting practically verbatim the last part of Dr. Green's paper.

Whereas: The medical profession is vitally interested, as it always has been, not only in the health of the wage earner, but also in the health, well-being and efficiency of every man, woman and child in the State. It is the duty of the State to protect every man from disease, whether he be employe or employer, wage earner or factory owner, millionaire or pauper, and to enable him to secure and retain to the utmost good health, efficiency and long life. Whereas: Such State public health work should be for the benefit of every citizen and not for any class. It should be in the form of united action by the people of the State for self-betterment rather than in the form of pauperizing subsidies and emasculating sick benefits. It should be carried on through the legally constituted health authorities of the State and not through a board of representatives of special classes and it should be based on the widest, fullest and most complete knowledge obtainable for the existing conditions in this State regarding the present physical condition of every man, woman and child therein. As scientific medical men we insist that any measures for the improvement of our citizens must be based on proven facts and not on unproven theories. Therefore Resolved that, instead of adopting any incomplete, illogical undemocratic and ineffective measure, the state legislature appropriate a sufficient amount of money to enable the state Council of health to make a complete and exhaustive study of the entire state, showing the amount of sickness existing among our people, the causes therefor, as fully as it may be possible to determine, the social, economic and industrial conditions existing in the state and their influence on the health of the people, together with any other facts which may be pertinent and to submit a report at the next session of the legislature showing the exact conditions existing together with recommendations as to how the existing health organization of this state may be increased and developed to a point where every citizen of the state, regardless of his economic condition or industrial status may be protected from disease and may enjoy the highest possible degree of good health, efficiency, happiness and long life.

COUNCIL PROCEEDINGS.

FIRST SESSION.

The Council held its first session of the 55th Annual Meeting of the Society in the Burdick Hotel, Kalamazoo, on May 25th, 1920 at 12:00 noon.

Present: Councillors Kay, Seeley, Jackson, Holdsworth, DuBois, Kiefer, Toles and Church President Baker, Treasurer Welsh and Secretary-Editor Warnshuis.

The Chairman's Annual Report to the House of Delegates was discussed and approved. (See Proceedings of the House of Delegates.)

The Secretary was directed to send a telegram of greeting to Councillor Southworth, who is recovering from a serious illness.

Adjourned.

SECOND SESSION.

The Second Session of the Council was held at 6:00 P. M., May 25th.

Present: Councillors Kay, Dodge, Du Bois, Church, Toles, Jackson, Holdsworth, Kiefer, Seeley, Treasurer Welsh, President Baker and the Secretary-Editor.

Councillor McLurg was excused on account of illness in his family.

The resignation of Councillor Bird was read and ordered referred to the House of Delegates.

The Secretary was directed to explain to the House of Delegates the purpose of the proposed plan for holding Regional Clinics.

The following nominations for Resident and Non-Resident Honorary Members were made and ordered transmitted to the House of Delegates:

As Resident Honorary Members:

Dr. William Fuller, Grand Rapids.

Dr. T. A. McGraw, Sr., Detroit.

Dr. F. N. Turner, Lansing.

Dr. J. D. Munson, Traverse City.

Dr. Eugene Boise, Grand Rapids.

As Non-Resident Honorary Members:

Dr. Hubert Work, Pueblo, Colorado, President-Elect of the American Medical Association.

Dr. Frank Smithies, Chicago, Illinois.

THIRD SESSION.

The Third Session of the Council was held at 12:00 noon, May 26th.

Present: Councillors Kay, Seeley, Dodge, Church, Jackson, Du Bois, Holdsworth, Toles, Kiefer, President Baker, Treasurer Welsh, and the Secretary-Editor.

The request of the House of Delegates that the expenses of the Hospital Standards Com-

mittee in attending the Michigan Hospital Associations Meeting in June in Detroit be paid was approved.

The request of the House of Delegates that the expenses of the Committee on Legislation when in Lansing on Legislative business be paid was approved.

The Secretary was directed to conduct a survey of the State to determine the distribution of physicians, to ascertain what communities are without physicians; to create a clearance bureau of information for the listing of localities where physicians are needed, to be of assistance in imparting information to physicians and communities as to locations or available physicians. The necessary funds for the expenses of such a bureau was created on motion of Councillor Church and supported by Councillor Dodge.

The appeal to the Council of Doctor E. L. Foley of Alpena from the disciplinary action pronounced by the Alpena County Medical Society was received.

The Secretary was directed to arrange for a hearing in compliance with the provisions of the Constitution and by-laws as early as possible in Bay City and upon completion of these arrangements to issue the call for the hearing.

FOURTH SESSION.

The Fourth Session of the Council was held at noon, May 27th.

Present: Councillors Kay, Seeley, Du Bois, Dodge, Jackson, Kiefer, Toles, Church, President Baker, Treasurer Welsh and the Secretary-Editor.

On motion of Councillor Dodge, supported by Councillor Seeley, Doctor W. J. Kay was elected Chairman of the Council for the ensuing year.

On motion of Councillor Church supported by Councillor Seeley, Doctor W. J. Du Bois was elected Vice-Chairman for the ensuing year.

W. J. Kay, Chairman.

F. C. Warnshuis, Secretary.

PROCEEDINGS OF THE HOUSE OF DELEGATES OF THE MICHIGAN STATE MEDICAL SOCIETY.

FIRST SESSION.

The first session of the House of Delegates of the Fifty-fifth Annual Meeting of the Michigan State Medical Society was called to order in the First Congregational Church of Kalamazoo at 2:00 P. M. Tuesday May 25, 1920.

The President, Dr. Charles H. Baker, Bay City, presiding.

REPORT OF CREDENTIAL COMMITTEE.

Dr. G. F. Young, South Haven, made a preliminary report of the Committee on Credentials.

A quorum of the House of Delegates having responded to the official call, the President declared the House duly constituted for business.

ELECTION OF NOMINATING COMMITTEE.

Dr. F. B. Walker, Detroit, nominated *Dr. Waller Wilson*, Wayne County.

Dr. J. D. Brook, Kent County, nominated *Dr. R. H. Nichols*, Ottawa County.

Dr. R. H. Nichols, Ottawa County, nominated *Dr. C. J. Ennis*, Chippewa County.

Dr. R. H. Spencer, Kent County, nominated *Dr. F. B. Marshall*, Muskegon County.

Dr. W. J. Wilson, Wayne County, nominated *Dr. J. A. Wessinger*, Washtenaw County.

Dr. A. W. Hornbogen, Marquette County, moved that the nominations be closed. Seconded by Dr. F. J. Lee, Kent County. Carried.

Dr. F. B. Walker, Wayne County, moved that the Secretary cast the unanimous ballot of the House for these nominees. Seconded by several, carried.

The Secretary reported the ballot cast and these five gentlemen were declared duly elected.

APPOINTMENT OF BUSINESS COMMITTEE.

The President appointed the following Business Committee:

Dr. F. B. Walker, Wayne County, Chairman.

Dr. V. J. Rickard, Eaton County.

Dr. G. F. Young, Van Buren County.

Dr. A. C. MacKinnon, O. M. C. O. R. O.

Dr. J. H. Burley, Lapeer County.

REPORT OF THE COUNCIL.

The Annual Report of the Council was presented by Dr. W. J. Kay, Chairman, Lapeer, and was referred to the Business Committee.

COUNCIL REPORT.

Pursuant to the requirements of our By-laws I herewith transmit the Annual Report of the Council to the House of Delegates:

FINANCIAL STATEMENT.

The following is the financial report of the Society for the year closing December 31st, 1919, January 6, 1920.

To the Council of the

Michigan State Medical Society.

Gentlemen:

I have completed the examination of the books and accounts of the Michigan State Medical So-

ciety for the year ended December 31, 1919, and am pleased to submit the following exhibits:

EXHIBIT A

Trial Balance, December 31, 1919.

Bond Account	-----	\$4,300.00	
Liberty Bond Account	-----	3,500.00	
Grand Rapids Savings Bank	---	925.78	
Accounts Receivable	-----	794.69	
Journal Expense	-----	7,781.23	
Society Expense	-----	2,943.59	
Reprint Expense	-----	644.90	
Annual Meeting Expenses	---	503.19	
Council Expense	-----	196.87	
Present Worth Account	-----	\$10,739.80	
Journal Subscriptions	-----	4,045.53	
Advertising Sales	-----	3,545.32	
Membership Dues	-----	2,276.25	
Reprints Sales	-----	527.48	
Interest Received	-----	389.00	
Outside Subscriptions	-----	30.62	
Defense Fund	-----	27.75	
Sale of Extra Journals	-----	8.50	
		<hr/>	
		\$21,590.25	\$21,590.25

EXHIBIT B

Statement of Revenue and Expenses for 1919.

REVENUE—

Journal Subscriptions	-----	\$4,045.53	
Advertising Sales	-----	3,545.32	
Membership Dues	-----	2,276.25	
Reprint Sales	-----	527.48	
Interest Received	-----	389.00	
Outside Subscriptions	-----	30.62	
Sale of Extra Journals	-----	8.50	\$10,822.70

EXPENSES—

Journal	-----	\$7,781.23	
State Society	-----	2,943.59	
Reprint	-----	644.90	
Annual Meeting	-----	503.19	
Council	-----	196.87	\$12,069.78

Net Loss for the Year 1919 ----- \$ 1,247.08

EXHIBIT C

Balance Sheet, January 1st, 1920.

ASSETS.

CURRENT—

Checking Account at G. R.

Savings Bank ----- \$925.78

Accounts Receivable ----- 794.69 \$ 1,720.47

SECURITIES—(In Custody of Treasurer.)

Liberty Bond Account ----- \$3,500.00

Masonic Temple Bonds ----- 2,300.00

Citizens Telephone Company

Bonds ----- 2,000.00 \$ 7,800.00

Total Assets ----- \$ 9,520.47

LIABILITIES.

Due Defense Fund -----\$ 27.75

Net Present Worth ----\$ 9,492.72

PRESENT WORTH.

Represented by Jan. 1st, 1919 \$10,739.80

Net Loss for Year 1919 1,247.08

Net Present Worth, Jan. 1, 1920 \$ 9,492.72

This financial statement reveals that our finances are in good condition in spite of added expenses and increased cost of publication of our Journal.

SOCIETY ACTIVITY.

On the whole the majority of our component county societies are accomplishing good work in their respective localities. The return of our members from military service, a more or less migratory movement of doctors to cities or new localities, and the new conditions arising by reason of post war adjustment have increased the membership of some of our societies at the expense of others. In certain instances there are but six or eight doctors in a county and a county society with regular meetings is impossible. Again in our northern societies the severe, prolonged winter with snow-bound roads has necessitated temporary abandonment of meetings, which have, however, again been resumed. In five counties the societies are virtually dead. The Council and your Secretary are busy with plans for their renewed activity.

It appears to your Council that there was never a time as the present when the need of active county societies composed of every eligible physician in the county was of such paramount importance. The kaleidoscopic changes that are taking place in our political, industrial and social spheres involve each member of the profession and threaten his erstwhile relations with the public at large. This is a day of representation and organized influence. Unless we disseminate unanimous organized opinions and requests our relationship to political, industrial and social representatives will become altered and our field of activity limited, our prestige will become subsidized, our influence and recommendations negative.

To circumvent such a state of affairs we recommend that the House of Delegates adopt a resolution urging a state wide campaign to secure as members of our county and state society every eligible physician and that such a resolution impose the duty of conducting such a campaign during the month of October, 1920, upon every county society with the added instruction that our state secretary be supplied with a report from each county society as to the result obtained.

MEDICAL DEFENCE.

The Council commends most heartily the work of our Medical Legal Committee and the splendid work that is being done by the Chairman of that Committee. We refer its annual report to the House of Delegates without further comment at this time.

COMPULSORY HEALTH INSURANCE.

The Council has no doubt but what your House will adopt a resolution expressing the Society's opinion and stand as to Compulsory Health Insurance. We do recommend further that provision be made to circumvent any attempt to pass such a bill at the coming meeting of the State Legislature to the extent of paying the expenses of designated representatives who shall go to Lansing in the interest of the profession.

AMENDMENTS TO OUR CONSTITUTION AND BY-LAWS.

The Council transmits to the House of Delegates certain amendments to our Constitution and by-laws (see official program) with the recommendation that they be adopted. The need of additional funds is necessitated by the increased cost of attorney fees, increased cost of Journal publication. In addition in order that our standing committees may pursue their duties, funds for defrayment of actual and necessary expenses are essential.

The Council further recommends that the House of Delegates appoint an adinterim Committee which shall redraft our constitution and by-laws so as to reconcile them to the amendments that have been made during the last ten years, clarify its language and simplify its verbiage. That this committee render its report and draft of new constitution and by-laws for adoption by the House of Delegates at its 1921 meeting.

CLEARANCE BUREAU.

The Council recognizes the fact that a number of communities are without the services of a physician. Our Secretary is frequently in receipt of requests for physicians and also requests from physicians for locations. We therefore recommend that the House of Delegates authorize our Secretary to take necessary steps to establish a clearance Bureau for Information for physicians and communities. This recommendation is also made because the Medical Department of our State University is also beseeched frequently for similar information and have recommended that our State Society assume this duty.

DISTRICT CLINICS.

The Council refers to the House of Delegates the following recommendation contained in our State Secretary's Annual report for discussion and action by the House of Delegates.

"It is recommended to the House of Delegates that it take action toward securing Regional Clinical meetings."

HONORARY MEMBERS.

The Council nominates and recommends to the House of Delegates the election of the following as Honorary members:

Dr. William Fuller, Grand Rapids.

Dr. T. A. McGraw, Sr., Detroit.

Dr. F. N. Turner, Lansing.

Dr. J. D. Munson, Traverse City.

Dr. Eugene Boise, Grand Rapids.

Dr. Hubert Work, Pueblo, Colorado, President-Elect of the American Medical Association.
 Dr. Frank Smithies, Chicago, Illinois.

W. J. KAY, Chairman.

REPORTS OF COMMITTEES.

Industrial and Civic Relations—In the absence of Dr. G. E. Frothingham, Chairman, Dr. R. H. Nichols, Ottawa, stated that the report of the Committee on Industrial and Civic Relations was printed on page 42 of the official program of the Association, and asked whether it was desired that it should be read or that the members should read it for themselves.

Dr. Walter J. Wilson, Wayne, moved that the report be read by title. Seconded by Dr. C. S. Wilson, Wayne.

REPORT

Committee on Civic and Industrial Relations Michigan State Medical Society.

Believing the question of 'Compulsory Health Insurance' to be one of vital importance to the Medical Profession, and realizing that a clear, definite understanding of the nature of the scheme was absolutely necessary to insure a fair and honest settlement, your committee decided to concentrate its efforts on an educational campaign along this line. It planned to get the very best and most reliable information and to place it in the hands of the members of this society thru its officers, its councilors, the presidents and secretaries of its county societies and thru its official Journal.

In securing this information and in transmitting it to the members of the profession no effort has been spared. Information, suggestions and advice were invited and this Committee is indebted to members of the profession and to sister societies of other states for the generous help which has been given.

Origin of Compulsory Health Insurance.

'Compulsory Health Insurance' may be called the flower of autocracy. It represents the supreme effort, in the guise of philanthropy, of an autocratic government to force its people into one mold and to crush out any semblance of individualism. When Otto, Prince von Bismarck, was building up the great German Empire; that Empire which was to dominate the world of art, of science, of medicine, of manufacturing and of commerce; that Empire which was to stamp "Kulture Made in Germany" on the face of the globe, he found one great obstacle in his path. To this man of blood and iron, the world was divided into two classes, the governor and the governed. The nobility were naturally in the first class, being Heaven sent. The business man could be nullified by the granting of special privileges in the shape of subsidies and the throwing in of a title, now and then for good measure. But, if 'Deutschland uber Alles' was to become a reality, there must be workers, beasts of burden who did not think; who asked no questions and who would obey the driver. There was the

rub. The socialists had given some signs of thinking and to let that go on, meant to ruin the plan for world domination. How to fasten these workers to the State so that the fall of one meant the absolute ruin of the other, called for all the cunning of this master of cunning. The scheme which turned the trick for Otto, Prince von Bismarck, the Iron Chancellor, the Man of Blood and Iron; the plan which threw the dust in the eyes of the socialists and made them kneel and eat out of the hands of the autocrat was what is known in America as "Compulsory Health Insurance."

And it did for Germany exactly what was planned. It strengthened the hands of the rulers beyond their fondest hopes. It shackled the workman. It bound him to his work bench with cables of steel as no other promise could have done. He had his "Compulsory Health Insurance" and the price was slavery. His individuality was lost. He was personally conducted from the cradle to the grave. Much is made by those touting the scheme in this country of what it will mean to the general health and well being of the workman. Germany shows that from the introduction of Social Insurance in 1883 to the opening of the World War in 1914 there was no improvement in the mortality rate nor any reduction in the loss of time from work on account of sickness; that the German workman in 1914 was living under conditions which were quite as bad as they were before the introduction of Social Insurance and that the 'one-room-per-family' in industrial centers was just as prevalent as before this insurance was established.

If one needs proof of how important the autocrats of Germany regarded this scheme of 'Compulsory Health Insurance' in their fight for world domination, it can be found in Prince Maximilian's speech in the Reichstag in 1916, when Germany believed the war won and was issuing statements of what she would demand at the 'Peace Table.' The Prince made a very strong point of the fact that Germany would demand that the allies accept "Compulsory Health Insurance" and that it must accept it within a prescribed time. Other things might be discussed at leisure, but 'Compulsory Health Insurance' must be put into immediate effect. The question which must interest every American citizen is "Why this Interest in the allied workmen?" The answer is quite plain. Germany wanted to crush out individualism in the allied countries. She feared the competition of freemen who thought and acted for themselves. A free people with initiative had no place in her fight for supremacy of the world.

German Propaganda.

We need not enlarge on the character of German propaganda throughout the world for years previous to the outbreak of the World War. It ran thru the literature of all countries, it wrapped its slimy coils around politics; it saturated the world of science and of medicine and it preached the supremacy of Germany and Germans so effectively, that the world was hypnotised into believing that it was a Super-Government of Supermen. And let us not forget that its joker which won many a trick was the great philanthropic scheme 'Compulsory Health Insurance.'

Compulsory Health Insurance in England.

As level headed a man as Lloyd George is supposed to have been spent some five weeks in Germany studying the plan of Social Insurance. He was deluged with statistics and charts and efficiency and uplift until he seems to have forgotten to look at the human element feature so lost was he in the jungle of words. He went back to England, anxious to put this Super Man system into operation. He has lived to see that words and works are two vastly different propositions. That is, it is very easy to work out figuratively how a system should operate but, when you come to substitute the human being for the inert figure, the equation does not work out. Lloyd George to-day would form a new party and scrap all his made-in-Germany-timbers.

Dr. Wm. A. Brend an English author who speaks with knowledge and authority writes, "The National Insurance Act is the most ambitious piece of public health legislation ever carried through in this country (England). No previous measure has directly effected so large a number of persons, involved so great a cost, made such demands upon the administration or been introduced with such lavish promise of benefits and no measure has ever failed so signally in its primary object."

'Compulsory Health Insurance' has spelled misery and degradation for the Medical Profession of England and it has not only failed to benefit the people but it has made malingering a science.

Compulsory Health Insurance Propaganda in America.

Backed by the best brand of German propaganda, Compulsory Health Insurance soon found a group of admirers in this country among certain college professors, theoretical sociologists and professional uplifters. They organized the "American Association for Labor Legislation" with headquarters in New York City and proceeded to work out a Standard Bill for Compulsory Health Insurance which it was planned to have adopted by the various states and end in a constitutional amendment. The committee which sponsored the original bill consisted of Edward T. Devine, Professor Social Economy, Columbia College; Miles M. Dawson, Consulting Actuary, Carroll W. Doten, Professor of Economics Massachusetts Institute of Technology, Alexander Lambert, M.D., Professor Clinical Medicine Cornell University retiring president American Medical Association, Harry Seager, Professor of Economics Columbia University, Lillian D. Wald, President Henry Street Settlement and John B. Andrews, author of books on sociology. Rather a rare group from a practical standpoint to assume to amend the Constitution of the United States. The Medical Profession, without whom, no Health Insurance law can be put into effect, is represented by Dr. Alexander Lambert, at the time a convert to the beauties of the German system. The workman for whose benefit all this is planned is not represented at all. The employer who must foot the bill is conspicuous by his absence and the average citizen counts not at all. As one man bluntly put it "The only

people represented are those who earn their bread by the sweat of their jaws."

Despite the utmost efforts of the theoretical sociologists, the German propagandists and the professional uplifters, backed by abundant funds, they have not been able to carry out their plans in a single state. New York defeated the measure every time it came up and this year Senator Davenport announces that he will not push his bill because the public mind has been poisoned against it. Dr. Rubinow who had been selected by Dr. Lambert as the paid expert of the American Medical Association Committee to study and report on 'Compulsory Health Insurance' went to California and helped put up a campaign for the measure. He went with all the prestige of being the expert of the American Medical Association but the people of California, in a referendum vote, voted Compulsory Health Insurance down by a vote of three to one.

Massachusetts has given the question careful consideration. Two legislative bodies have voted against the plan and it has been rejected by members of the Constitutional Convention. Commissions in Illinois and Wisconsin have reported against the measure. But no matter what happens, the propagandists are always in fighting trim, waiting for an opportunity to get the scheme working in just one state. Foiled here, they turn elsewhere and with their apparently inexhaustible purse, the fight is never ending.

American Medical Association's Relations to Compulsory Health Insurance.

The American Medical Association's interest in Compulsory Health Insurance appears to have started in 1915, when Dr. Alexander Lambert, then chairman of the Judicial Committee brought up the subject at the San Francisco meeting. Dr. Lambert asked that a committee be appointed to consider the subject. Under the by-laws of the A. M. A. it appears that no Council can appoint a sub-committee, saving that of the Council on Health and Public Instruction. A sub-committee of this Council was therefore appointed to study and report on the question of Compulsory Health Insurance.

This first committee was made up of Dr. Lambert, Dr. Favill, (then chairman of the Council on Health and Public Instruction) and Dr. Cotton of Boston.

Dr. Lambert was authorized to select an Executive Secretary and his choice was Dr. I. M. Rubinow who had been an enthusiastic advocate of Compulsory Health Insurance for a dozen years or more. It is of this appointment that Dr. Mac D. Stanton, chairman of the Committee on Public Information, Schenectady county, N. Y. Medical Society wrote "In our opinion Dr. Rubinow's appointment was of itself, little short of a breach of good faith on the part of those responsible." In the same letter, Dr. Stanton calls attention to the character of the propaganda in the pamphlets issued by the Council of Health and Public Instruction, the authors of which are Dr. Lambert and Dr. Rubinow. He cites pamphlet 5 which as a matter of fact is a speech by Dr. Rubinow glorifying the beauties of 'Compulsory Health Insurance' and rejoicing that he is

to live to see the fruition of his plans for which he has been laboring fifteen years. The pamphlet has no place in the literature which should emanate from such an association as that of the American Medical Association. Yet Dr. Rubinow was paid out of the funds contributed, in the shape of dues, by men who have been forced to spend their own time, their own money and their own energy in fighting the propaganda of Dr. Rubinow for Compulsory Health Insurance. When this point has been taken up with the Council on Health and Public Instruction, it throws the burden on the House of Delegates. It is not the function of the Council on Health and Public Instruction or that of any other Councils, Boards or Committees of the Association. This, so it is said, is a function reserved exclusively for the House of Delegates and nobody has any right to speak for the Association. So jealously is this right said to be guarded, that Chapter 13 of the By-laws specifically provides that no memorial, resolution or opinion of any character whatever shall be issued in the name of the American Medical Association unless it has been approved by the House of Delegates.

The issue is therefore clearly drawn. If the House of Delegates is responsible for this 'Compulsory Health Insurance Propaganda' issued by the Council on Health and Public Instruction, it is clearly the duty of the various State Societies to take up this matter and send their delegates to the Annual Meeting of the House of Delegates of the American Medical Association with instructions to find out just why this "Committee to Study and Report on Compulsory Health Insurance" is continued year after year, despite the fact that state after state has lined up against it. Why is no action taken by the House of Delegates on a report of the Committee, when the Secretary after ten years study is squarely on record as of the opinion that there is no demand for Compulsory Health Insurance and that even if conditions demanded it, he does not believe that 'Compulsory Health Insurance' would remedy them. Let delegates be instructed to find out just why this Rubinow propaganda should be continued to be sent out, when Dr. Rubinow is said to be a paid employee of the American Association for Labor Legislation, the Master Worker in foisting this German born scheme on the American people. Let the delegates be instructed to find out whom Dr. Alexander Lambert represented at Albany, when he appeared in favor of the bill for 'Compulsory Health Insurance.' Was he representing the American Medical Association whose president he was, or was he representing the American Association for Labor Legislation of which he is an official? This may seem harsh and cruel. But what about the men in New York who have been compelled to spend their time, their money and their energy, fighting against this measure and its sponsors, who were supplied with ample funds not of their own earning. That was hard enough and sacrifice enough without their being compelled to fight their own chosen leader, the president of their great central organization. The very fact that the president of the American Medical Association appeared in Albany in favor

of 'Compulsory Health Insurance' was worth an Army corps to its proponents.

Let delegates be instructed to look into this reference committee which seems to have the power to smother any resolution which does not meet with their approval. Instruct them to find out and report back on the influences appointing this committee. Briefly instruct your delegates to be live wires and not merely rubber-stampers to approve the plans of others.

Why Action on Compulsory Health Insurance Should no Longer be Deferred by the House of Delegates of the A. M. A.

There is but one solution of the problem of why all this delay by the House of Delegates of the A. M. A. The proponents of 'Compulsory Health Insurance' know that time is their great ally. If the rank and file can be lulled into sleep; if they can keep on postponing action on this question, they expect to wear down the opposition. With the purse of Fortunatus behind them; with their pay checks coming in with charming regularity, with San Francisco as far as Hoboken, if they are to take a trip for propaganda, they can well afford to wait. But what of your brother physician. Time to him spells loss of money, loss of a possible vacation, loss of an opportunity to study and loss of time with his family. He is the one to make the great sacrifice. His opponent is paid for his propaganda and when this job is finished, he will be off looking for something else to uplift and standardize.

If instead of each state fighting its lone battle, the great central organization were called upon to fulfill its functions, then fighting as a unit, the medical profession would soon put an end to this guerilla warfare, beaten down by one state, only to crop out in another and then back again. If in five years, the committee to study and report on 'Compulsory Health Insurance' are not ready to report, it is because they have nothing favorable to report and are simply stalling until a demand for the goods can be worked up through fair means or foul.

In symposiums held by the Kings county (N. Y.) Medical Society, Dr. Alexander Lambert, then president of the American Medical Association gave utterance to what must be construed as a threat and as a club to beat the profession into accepting 'Compulsory Health Insurance.' Dr. Lambert is quoted in the Long Island Medical Journal for December 1919 as follows:

• "The fallacy that medicine is practiced as a right after a license is given by the state must be changed to a realization that the state permits as a **privilege** certain qualified persons to practice medicine and that **privilege** can be modified by the state."

Translated, this simply means that, if the medical men prove refractory on this question of 'Compulsory Health Insurance,' their right to work and earn a livelihood can be taken from them. Truly "made in Germany" is stamped all over that paragraph.

Arguments for Compulsory Health Insurance.

There are three stock arguments used by advocates of Compulsory Health Insurance by its medical proponents.

1. Social Insurance is bound to come. If the Medical Profession is wise, it will get in the band wagon and perhaps get an opportunity of holding the reins.

2. The overwhelming majority of the medical profession are against Compulsory Health Insurance thru fear that it will hurt their own business and thru ignorance of the principles of the scheme.

3. With the introduction of 'Compulsory Health Insurance' the millenium will be ushered in. There will be no more poverty; there will be no more sickness; there will be no more lost time; maximum hours; no more strikes; no more misunderstandings between capital and labor. Everyone will be happy and contented but the man most needed to make 'Compulsory Health Insurance' a success and that is the medical man. He is the goat, the burnt offering to be sacrificed.

The first argument that 'Compulsory Health Insurance' is bound to come is the argument of the compromiser, the man who would rather run than stand and fight. It was the argument of Gen. Hull, when he surrendered Detroit without firing a shot in its defense. It was not the argument which makes the name "Alamo" one to bring a man to his feet. If Davy Crockett and his immortals had believed in that argument, there had been no state of Texas in the Union to-day; there had been no glorious battle of Lake Erie if Perry had been a compromiser; there would have been no Chateau-Thierry, if the American Boy had been a quitter. There would have been no Declaration of Independence, if the Signers of glorious memory, had been afraid of odds. If the medical profession of this country believe that this is an iniquitous measure; if they believe that it will destroy the individualism of this country which has made it great; if they read their history aright and know that it was a plan of an autocrat to intrench the House of Hohenzollern and enslave the workers, it were far better for the world, if the last physician went down fighting rather than to surrender honor without a blow. The argument is a disgrace to the one who makes it and insult to those to whom it is made.

The second argument that the great majority of the medical profession oppose the measure through fear and cowardice carries its own answer.

Have they forgotten or did these uplifters never hear of those men who went to certain death that the cause of yellow fever might be established? Have the men who make this ribald argument ever known a real physician to refuse a call of need, however dark and stormy the night, however tired and hungry he might be. Dr. Rubinow sarcastically refers to the poetic country doctor who is to be legislated out of existence by this glorious scheme of social insurance. We would not like to think of what might happen to the learned gentlemen, if he made that argument in the home town of many

and many a country doctor that we have known. We who work in the great cities, have hospitals, trained nurses, specialists on every hand for consultation. The country doctor goes out into the night with his kit in his hands, the love of his neighbor in his heart, hard common sense, earned by struggle and work in his brain and he produces results that can many times shame the best equipped. To call such a man a coward and an ignoramus is to insult the whole medical profession.

When any man or any set of men arrogate to themselves all the knowledge on a given subject, he and they really know too much for their own good and that of society at large. The man who feels that he has exhausted a subject is so bigoted and so narrow minded that he is a menace to the community. We have seen the effect of this narrow mindedness and bigotry in politics and in religion and we do not want to see it duplicated in medicine.

In the states in which the medical profession have given the greatest amount of study and attention to this question, we find the profession most bitterly opposed to it. Take for example, New York, Massachusetts and Illinois. In a scholarly paper on Compulsory Health Insurance Dr. Henry Lyle Winter of Cornwall-on-the-Hudson, New York, chairman of the Committee on Economics Medical Society, State of New York writes:

"In this, the greatest period of social unrest, which the world has ever experienced, every individual and every group of individuals has to face problems of more or less far reaching importance. Were they given opportunity by their leaders, usually self appointed and having as many motives as there are varieties of character, the great mass of the people would settle down into regular modes of life. But stimulated imaginations do not make for peace and we can feel no assurance that the comparative sanity of 1915 will be recovered immediately.

We physicians have had our problem before us for several years. A set of radical measures which compel all employes in certain groups and their employers to pay sums of money into funds which are to provide employees without further cost medical, surgical and dental care, medical and surgical supplies, nursing, hospital and sanitarium care, cash indemnities for time lost through illness and funeral expenses. These measures are known as social insurance, or Health Insurance and comprise the most radical scheme for social legislation which has ever been presented in the United States.

There has been no radical measure which has so nearly succeeded in being put upon the statute books in New York state. This is our problem because the public welfare and the public health are involved. It is our duty to push ourselves forward and solve it. The problem is an acute one.

The medical profession has been led to assume that it must limit its attention and criticism to the medical provisions of the proposed Health Insurance Legislation and that the subject as a whole would receive more competent treatment in other hands. This is a mistaken attitude. It

is also a dangerous one because there are many phases of these measures which have no direct connection with the medical provisions but which exert an influence upon the public welfare and general efficiency. Its enactment means the introduction of an entirely new and epoch marking factor into American institutions, that of **paternalism**.

The phrase "Made in Germany" was stamped on every conceivable object, and these goods met every competitor's price, at times, I am told, by a sacrifice of profit or at actual loss but **usually by reduction in the cost of production either by increased hours or reduced wages to the employees**.

One cannot dance unless one pays the piper, and Germany was paying in the most valuable coin in the world, the individuality of her citizens. The paternal government had deliberately killed its individuality. **German Social Insurance had lost the war.**

Being perpetual alarm clock is not an especially alluring occupation but some one has to rouse the people and I feel that it is the duty of the medical profession to undertake the task in so far as social insurance is concerned. We must decide whether we prefer to live under conditions which develop individual excellence or under those which relegate the individual to the mediocrity of group commercial supremacy.

German statistics appear to show that poverty was steadily increasing before the war.

The necessity for Health Insurance has not been proven. Its proponents are trying to force a system upon the workingman which he does not need and which, if he knew anything about what is going on would not accept. Where labor has been informed and where a vote has been taken the workingmen have almost unanimously opposed. In a test vote taken in Utica, New York, where no influence was brought to bear pro or con on the working man only 112 out of over 15,000 voted for Health Insurance. The American workingman might, perhaps, be willing to carry this weight collectively, if benefits were apparent, but when labor is shown that somebody else is going to carry the other half and that labor will be 50% pauperized by the enactment of health insurance legislation, I believe that labor will be self respecting enough to revolt.

Just as soon as labor puts her neck under the yoke of paternalism she will fix her station definitely and for all time. She will have established a class distinction and become dependent. She will have established a legacy for her children and her children's children and a class hereditary "hewers of wood and drawers of water" will exist in the United States as it now does in Germany. This Health Insurance agitation has been good for us. If it goes no further it will have brought us more firmly together than any other thing which has ever come to us. If it goes further and becomes a law, it will submerge individuality of effort among us as it did in the profession in Germany. We will work and hope against such a calamity.

1918 Report of Massachusetts Commission on Social Insurance.

An analysis of the evidence reveals no growing demand in the Commonwealth for compulsory contributory health legislation. On the contrary, if we are to judge from the experience of the former commission considering this question, there appears to be an increasing hostility to this type of insurance on the part of the representatives of large aggregations of individuals who in the final analysis would be most vitally affected by such a measure.

The so-called compulsory contributory system of Health Insurance has few supporters. There appears to be two serious obstacles to the enactment of legislation of this character namely the united oppositions of employer and employee to the scheme and the difficulties presented by the constitutional aspects of the question. The majority of the commission feels that it cannot recommend a plan of this character which is without precedent anywhere as far as it has been able to determine and which is manifestly inequitable in its apportionment of the cost.

We find among those who were formerly disposed to favor compulsory sickness insurance a growing suspicion that the compulsory feature of such insurance infringes on the rights of the individual. A study and comparison of the evidence presented to the former commission and our own further confirms us in our opinion that there is much less inclination at the present time to look with favor upon Compulsory Health Insurance in the state than was the case a year ago. Moreover, opposition to compulsory insurance, judging from the numbers present at the hearings and the nature of their testimony appears to have been stronger this year than last. It is natural to assume that the medical fraternity is interested in raising the plane of the health of the community, but the majority regard it as significant that the profession as a whole asks for no legislation.

Report From Illinois Committee.

The scheme (Compulsory Health Insurance) is impractical and unfair, in that you could not bring more than a small portion of the wage earners within its provisions.

It presents no element of security or solvency. It insists upon compulsion, yet cannot compel. It claims all described laborers and wage earners, yet admits that many cannot be brought within. It proposes co-operative administration without state participation, yet it makes the whole plan absolutely state controlled, dominated and dictated, because no association can organize or make a move without the consent and approval of the State Commission appointed by the Governor.

It contemplates that the real cost of operation shall not be known, as it provides that a very large part of the expense shall not be paid from the funds collected but shall be paid through the general expense fund of the state.

It provides that wage earners may insure outside the regular association organized under the law, but it provided penalties against the employers of such if they do.

It recognizes probable insolvency of associations, yet makes no provision against the same.

The entire agitation is artificial and ill advised. It is a scheme of paternalistic government of the rankest kind and antagonistic to the spirit of American Institutions and the ideals of our democratic form of government.

The American people are not willing to change from individualists to paternalists.

Compulsory sickness insurance for workers is based upon the theory that they are unable to look after their own interests, and the state must interpose its authority and wisdom and assume the relationship of parent and guardian. There is something in the very suggestion of their relationship and this policy that is repugnant to free born citizens, because it is at variance without concepts of voluntary institutions and individual freedom.

To compel a citizen against his will, to enter into an insurance contract and impose upon him the burden of paying the premium, in whole or in part, is un-American and dangerous to civil liberty.

The adoption of health insurance would mark the beginning of a socialistic state under which all rights of the individual are subordinated. The American people have not yet reached a point where they are willing to relinquish to the state or federal government the right to perform these new functions, which really have their origin in the monarchical governments of the old world.

Samuel Gompers, President of the American Federation of Labor.

No one can accuse Samuel Gompers of being asleep, where the interests of labor are concerned and yet this is what he said relative to the legislation which the American Association for Labor Legislation is trying to force on the American people. At the hearing of the bill before a congressional committee, Mr. Gompers said:

"First let me call your attention to the fact that these are not facts. They simply have their bases in a peculiar and speculative theory, called by the possessors, philosophy, but which might better be termed sophistry. From the viewpoint of the super-speculative theorists; when facts do not conform to the theory, so much the worse for the facts. In other words the Socialists or the Professorist of the Socialist party start out with the theory and then proceed to distort facts in order to try to prove it.

The whole scheme, the whole fault, the whole philosophy presented by Dr. Rubinow officially before this committee and by Dr. London, as representative of his political party (Socialistic), contemplate not individual development, not opportunity for initiative, for voluntary action, but regulation by the State. These people want to have laws enacted to make the other people conform to their concepts and recipes out of number.

May I say this, that Dr. Frederick Howe, who has written a book dealing with Social Insurance, in making a contradistinction as to the systems in vogue in the United States and Germany, makes a very significant remark—**Germany has so strengthened the State as to devitalize the individual.**

I believe in that class of American citizens who believe in the vitality of the people as against socialized government."

So much for testimony on the second stock argument. Now for the third, the arrival of the Millenium. The millenium had not arrived in Germany after 31 years of 'Compulsory Health Insurance.' No millenium, saving of idleness and discontent, seems to have appeared in England which took pattern after Germany. Evidently the perfect day has been side tracked somewhere but its promise is now being offered by the proponents of social insurance to America.

There is no questioning the fact that England is terrified at the fearful pace with which costs of social insurance are rising and at the increase of malingering which has been developed into an exact science.

Dr. Royal Meeker, United States Commissioner of Labor Statistics adds to the gaiety of sorrow of nations by discovering the fact that half of the ills that beset mankind are due to employment. From time immemorial, we have been taught to pattern after the ant and the bee; that to be a sluggard invited physical, mental and moral deterioration. Men of the Thomas Edison type who believe in working for the night is coming and then you work some more real wrong. Dr. Meeker dismisses the claims of malingering as a myth, a figment of the imagination. What a pity Dr. Meeker is not engaged in the active practice of medicine in some public clinic or in the practice of industrial medicine. We fear his myth would become a fearful reality.

It is just such foolish statements that make for social unrest. One worker reads it in his Labor Review; he notes the high sounding title of the author; he passes it on to another and it goes the rounds and soon the virus has affected the entire force of a plant. It will not take a commissioner on statistics to show that production in that plant is going to fall and few of the investigators will ever learn the true reason.

The agitation for 'Compulsory Health Insurance' is bringing out some rare information in the lay press. A dispatch in a Detroit paper, dated Portland, Oregon, March 15, reads:

"Here is what the surgeons, physicians and dentists of Portland want according to Otto Hartwigg, president of the local federation of labor; an eight hour day; the right to picket offices of non-union medices; the power of sympathetic strikes; a living fee. But there are two little problems to be solved, one is a name for the organization and the other is to classify workers because they accept fees. But this difficulty will be remedied in time, said Mr. Hartwigg. The name suggested is "The Associated Union of Dissectors, Pulse Takers and Prescribers."

We might add that should 'Compulsory Insurance' go into effect, the name may not be such a misfit after all.

Your committee believe that the situation can be summed up in the words of Dr. Frederick R. Green, Secretary of the Council on Health and Public Instruction of the American Medical Association; Dr. Green writes:

"My personal feeling ever since this discussion was begun ten years ago, has been one of suspended judgment up to last year. Since the reports of the various Commissions and the broader discussion of the subject, I am unable to see that the advocates of 'Social Insurance' have proven either the need for such a plan in this country or that, if adopted, it would prove a remedy for the conditions complained of. In a word, I am not able to see that Social Insurance is necessary in this country or that it would be effective, if introduced."

Your committee are of the opinion that in the light of all the testimony, there is no longer the slightest excuse for deferring action on this question of 'Compulsory Health Insurance.' To let it drag on for another term of years on the plea of further study and investigation is simply giving the proponents of 'Compulsory Health Insurance' time in which to work up an artificial demand for their goods.

Your committee believe that this country is confronted by a great international organization, so-called citizens of the world, men without a country. That it is well financed is proved by its numerous activities, now in New York anon in California and the fact that it keeps a salaried staff armed and ready to do battle for 'Compulsory Health Insurance' or any of its pet measures at a moment's notice. Your committee believe that the rising generation are being sent out of our great universities thoroughly imbued with the idea that all the laws of nature are to be reversed; that no longer shall man earn his bread by the sweat of his brow but he that worketh shall not eat; but he that worketh **not** shall be clad in purple and fine linen. Your committee believe that the growing caste of professional, well paid uplifters is a growing menace to the comfort, welfare and well being of this country; that the uplifters hope to make out of life one great Cooke's excursion, with themselves in the role of conductor and mankind in the role of the 'personally conducted' its sole right being to put up with errors of omission and commission of their conductors and to "pay the freight."

Your committee believe that an active propaganda exists looking toward preventing the medical fraternity from taking an active part in opposition to this scheme on the score that it is a question of economics and not of medicine. Yet the Compulsory Insurance propagandists make medicine the corner stone of the whole structure.

Those who argue this phase of the question fail to remember that a man is a citizen and a taxpayer and that being a physician does not automatically deprive him of his rights of citizenship. Your committee believe that the proponents of 'Compulsory Health Insurance' in the American Medical Association have been given the squarest of square deals; that the weight of funds, high official position and opportunities for propaganda have been on their side and yet that they have lamentably failed to prove that there is either a need for the plan in this country or that if enforced it would remedy anything of which they complain. Your committee believe that the medical fraternity should take a firm stand against

this 'Compulsory Health Insurance' scheme and that no effort should be spared in placing the matter squarely before not only every member of the medical fraternity but before every citizen and taxpayer in the state; in view of all this your committee have adopted the following resolutions:

Resolutions

Whereas The committee of the American Medical Association on 'Social Insurance' have spent five years in an intensive study of this question; and

Whereas In every state in which there has been a broad, comprehensive discussion of 'Compulsory Health Insurance,' an overwhelming majority of the Medical Profession are opposed to this scheme as un-American and one which will undermine and destroy the sturdy individualism which has made for the greatness of the country; and

Whereas There are no conditions existing in this country to warrant even the consideration of such a measure and that granted, if there were such conditions existing, the plan proposed would not prove a remedy; therefore be it

Resolved That the Michigan Delegates to the Annual Meeting of the House of Delegates to be held in New Orleans be urged to use their influence and co-operate with delegates from other states in bringing this question of 'Compulsory Health Insurance' to an issue and in having the House of Delegates take a firm stand on the question; That the Michigan Delegates be urged to oppose any attempt to indorse 'Compulsory Health Insurance' under whatever name it may appear, whether as Health Insurance, State Medicine or Contributory Medical Insurance, the underlying principle being in every case the same.

Resolved That the Michigan Medical Society be urged to take a decided stand against 'Compulsory Health Insurance'—that the educational campaign be not confined to the Medical profession but be brought home to every citizen and taxpayer of the State.

Resolved That a copy of these Resolutions be sent to each delegate from Michigan to the House of Delegates of the A. M. A. and that the Resolutions be incorporated in and form a part of the Report of this Committee to the Michigan State Medical Society.

G. E. Frothingham, Chairman,	Detroit,
C. D. Munro,	Jackson,
R. H. Nichols,	Holland,
W. H. Sawyer,	Hillsdale.
J. D. Bruce,	Saginaw,
J. D. Riker,	Pontiac,
F. B. Walker,	Detroit,
C. B. Fulkerson,	Kalamazoo,
Guy Johnson,	Traverse City,

Committee on Civic and Industrial Relations
Michigan State Medical Society.

The Secretary announced that the matter was to receive a full and thorough discussion on Thursday morning by special speakers. to

be followed by a free-for-all discussion by the members of the Society.

The President referred the report to the Business Committee.

PUBLIC HEALTH EDUCATION.

In the absence of the Chairman the report of this Committee was passed.

TUBERCULOSIS.

The report of the Committee on Tuberculosis was presented by Dr. H. M. Rich, Wayne, and was referred to the Business Committee.

REPORT OF COMMITTEE ON TUBERCULOSIS.

Your Committee begs leave to report as follows:

The situation in the State of Michigan in regard to the tuberculosis problem is such as to enlist the interest of every man in medical or surgical practice. While it continues to be a chief cause of death and a continual high factor in morbidity, there are many encouraging aspects to the situation.

It may be interesting to call attention at this point to the fact that the national census reports show that tuberculosis was the chief cause of death until 1912. In 1904, *e. g.*, the death rate from tuberculosis was 200.7 per 100,000. This declined to 141.6 in 1916, a decrease of nearly thirty per cent. In 1917 and 1918 the rate increased slightly, due undoubtedly to generally abnormal health conditions associated with war and the influenza epidemic. We confidently expect the tuberculosis rate to **continue to decrease**. The very marked success which we now have in treating tuberculosis when diagnosed early, and our consistent progress in providing proper accommodations for the treatment of these cases, leads us to believe that even without the discovery of a specific remedy for the disease great reductions in its prevalence are possible. This being true, your committee feels like urging upon the members here present the desirability of identifying themselves with anti-tuberculosis movements in your community. After all, these movements are not likely to make great progress unless the medical profession supports them.

A very practical way for each member to approach this question is to ask himself: have I proper facilities at my command to care for the cases of tuberculosis which come to me for direction? On your fair and honest answer to this question is the determination of your responsibility. If your community is not equipped to offer proper institutional care for suitable cases, then it is your duty to agitate the question of providing such care in some way. You can at all times obtain counsel and assistance from the members of this Committee, the State Anti-tuberculosis Society and from the State Board of Health.

Your Committee begs to call attention to the very remarkable number of non-tuberculous pul-

monary affections which have followed the influenza epidemic, such as pleurisy with effusion, empyema, encysted and interlobar pleurisies and especially interlobar empyema and lung abscess. Successful treatment depends upon an early and accurate diagnosis, and these cases should not be sent to a tuberculosis sanatorium.

Your Committee believes that a State Tuberculosis Sanatorium should be established in the Upper Peninsula of Michigan, and would recommend that this body instruct its Legislative Committee to urge such action at the coming session of the State Legislature.

We would here call attention to the following Resolution adopted by the American Medical Association at its recent meeting in New Orleans:

"RESOLUTION CONCERNING MIGRATION OF INDIGENT CONSUMPTIVES.

WHEREAS, The National Tuberculosis Association, through investigations of its Committee on Indigent Migratory Consumptives, covering the last fifteen months, has found:

That there is a large migration of indigent consumptives to the Southwest in search of health; That out of 1,786 cases, largely indigent or potentially indigent, reported from the Southwest in the last six months, 738 or 41.3 per cent., had been definitely advised to go there by physicians; That this migration of indigent and potentially indigent consumptives is ill advised in that it causes much needless suffering and loss of life brought on by inadequate care, worry homesickness and lack of proper food, which are conditions too frequently experienced after arrival; and, furthermore, That the migration of this group is a menace to the public health, both during migration and after arrival, and is a financial drain and social burden to the communities to which the migration goes. Therefore, be it

RESOLVED, That in order to check the unnecessary and undesirable migration, physicians throughout the country be not only requested but urged **NOT** to advise their tuberculosis patients to migrate to the health resort States, unless such patients have sufficient funds to properly provide for their necessary care and comforts for at least one year.

AMENDMENT TO THE FOREGOING RESOLUTION. **RESOLVED**, That the Section on Preventive Medicine and Public Health hereby requests the House of Delegates to instruct the Council on Health and Public Instruction to investigate and report on, at the next annual session, the migration of consumptives from one State to another throughout the Union and the number of indigents so foisted on one State by another, and report definite suggestions to prevent this constant undesirable migration."

We heartily support the sense of this Resolution and take this opportunity to call attention to the fact that the indiscriminate advice to tuberculous persons to "Go West" is wrong, and that such advice should never be given except after due consideration of all the factors involved.

We wish further to invite the attention of our members to the following telegram, sent to the American Medical Association, in session in New Orleans, by the Surgeon-General:

"Washington, D. C., April 27, 1920.

President, American Medical Association,
New Orleans, La.

I desire to urge more active participation by the general practitioner and by general hospitals in treatment of tuberculosis to insure earlier diagnosis, properly trained interns and other personnel to popularize treatment in the home climate, and to provide additional facilities. I earnestly endorse the resolution passed by the National Tuberculosis Association in 1916, recommending that general hospitals should admit tuberculosis patients and provide separate wards for that purpose. Sanatoriums and specialists in tuberculosis will always be needed and we should have more of them, but I believe that success in the anti-tuberculosis campaign is largely dependent on, first, convenient facilities for observation and prompt treatment of patients with open tuberculosis; and second, in a sharpened perception and higher degree of skill by which the family doctor will make an early diagnosis or even forestall the development of clinical tuberculosis in the adult before a definite diagnosis is possible; to provide adequate care for tuberculosis ex-service men and others, and protect infants from infection. Enlist the aid of the general practitioner, allay phthisophobia, and improve home treatment of tuberculosis. The opening of general hospitals to this most common of all serious diseases will materially assist.

CUMMING, Surgeon General, U. S. P. H. S."

It seems advisable to your committee also to call attention at this time to the importance of the claims of the ex-soldier with tuberculosis. The U. S. law states that any ex-soldier who shall become affected with pulmonary tuberculosis within five years from the date of his discharge from the army, or who even later may allege with good reason that his army experiences were the cause of his tuberculosis, shall be entitled to receive treatment in an approved Sanatorium at the expense of the government, and shall in addition, receive the sum of eighty dollars per month. This is a just law but likely to abuse because of unworthy and non-tuberculosis individuals who seek an asylum with pay to relieve themselves of the necessity of working for a living. Our members are urged therefore to make affidavits in these cases only after careful examination, to the end that justice may be done and that the doctor shall not become an unwitting party to a fraud.

The suggestions in this report indicate that there still remains much to be done by the members of this Society. We would respectfully request that this report be read to each County Society in this State at its first meeting next Fall by the Society Secretary.

Respectfully submitted,
H. M. Rich, Chairman.

INSURANCE.

In the absence of the Chairman, Dr. F. B. Tibbals, Wayne, this report was made by Dr. F. C. Warnshuis. Dr. Warnshuis stated that a committee was appointed at the 1916 session of the Society to investigate the policy and advisability of adding as a State Society member-

ship feature indemnity protection for malpractice, the Society to pay any judgment that might be issued against its members. The activities of the war had made conditions such that it had been impossible to do anything in this line. The committee now reports back to the House of Delegates to learn whether or not it was still the wish that they should undertake this investigation.

The President referred the report to the Business Committee.

VENEREAL PROPHYLAXIS.

Dr. A. H. Rockwell, Kalamazoo, Chairman of the Committee on Venereal Prophylaxis, stated that the report was printed in the official program of the Society. The report was accepted as printed and referred to the Business Committee.

REPORT OF THE COMMITTEE ON VENEREAL PROPHYLAXIS.

The war made it possible for venereal diseases to receive the attention that they deserve from health authorities, from physicians and from the public. The "Program of Attack on the Venereal Diseases" was followed with great determination by the War Department with the result that the incidence of new cases of venereal diseases in the army was less than half of what it was before the war.

The prevention of these diseases in the way indicated by the "Program of Attack" has received the indorsement of civilians generally and is now a task resting largely on the civilian physician as well as on those forces that make for good government, high moral standards and a proper training of our youth. The physician bears the responsibility for the strictly medical efforts of prevention, the accurate diagnosis in each case as it presents itself and for giving the patient thorough treatment and instruction. He bears the further responsibility for reporting each case to the health authorities.

The social and educational measures that were started during the war for the purpose of reducing the prevalence of venereal diseases should be strongly emphasized. These measures should be continued in civilian communities.

Under the program for the army the "methods of attack" on venereal diseases were divided into four classes: A. Social measures to diminish temptation; B. Education of soldiers and civilians in regard to venereal diseases; C. Prophylactic measures; and D. Medical care.

The Michigan State Medical Society should encourage the general program to carry the social, recreational, educational and medical activities into civil communities with faith and confidence that the material results obtained in the army may be secured for our civilian population.

Respectfully submitted,
A. H. Rockwell, Chairman.

MEDICAL EDUCATION.

The report of the Committee on Medical Education was accepted as printed in the official program and was referred to the Business Committee.

REPORT OF COMMITTEE ON MEDICAL EDUCATION.

The Committee on Education begs to report as follows: Some fifteen years ago, about the date upon which the Council on Medical Education launched its organized propaganda for an ideal standard of medical qualifications for practice in this country, the number of medical schools in the United States exceeded the total in all the rest of the world. Since that time (1904), one hundred five medical colleges have become extinct, and of these, fifty-five were merged into other and stronger institutions. Some thirty medical colleges have come into existence since 1904. At the present time there are eighty-five medical colleges in the United States classified by the council as follows: Class A, 66; Class B, 10; Class C, 9. In 1904, there were 28,142 students registered in the 162 medical schools of this country. In 1919, the total number of registered students in the eighty-five colleges, was 13,052. In 1904, only four colleges required college work for admission, and only thirty were requiring a high school diploma or its equivalent. Some forty of the 162 medical colleges existing in 1904 were without laboratories and without proper clinical material. At this date (1920) not one of the medical colleges classed as "A" but has at least five well equipped laboratories, in charge of full-time qualified professors, and the clinical material is sufficient and well organized.

The chief contributing causes responsible for the excessive number of medical colleges and students in 1904, and also prior to that date, were as follows: Low standard of preliminary education and the method of its valuation and enforcement; unorganized and defective medical course; inefficient teachers and poorly equipped (if any worthy of the name) laboratories inefficiently used; absence of or improperly used clinical material; abuse and violation of the condition and advanced standard regulations in force by the better grade and honest schools; want of efficient thorough and impartial inspection and rating of medical, literary and other colleges and secondary schools.

The conditions involving medical education in the United States prior, and even for some years subsequent to 1904, have gradually and surely been overcome to the extent of over 90 per cent. The results obtained should be credited to the splendid system of work of the Council on Medical Education, actively assisted and backed by the State Medical Boards and the Associations of American Medical Colleges.

The ideal standards of medical education advised by the Council in 1906, have been practically accomplished, and are facts of standard today. Briefly, they are: (a) Matriculation, a standard four year high school diploma. (b) 60 semester hours (2 years of college work in

physics, chemistry, biology, English and a foreign or dead language). Of the 60 hours, 40 hours are required and 20 hours are elective.

The most important feature of the matriculation standard of today, is its exact evaluation and enforcement. It must be prior to Medical course and without conditions or substitutions in required subjects.

Medical Course. (a) Averages in time from eight to nine months of at least four thousand hours, grouped into divisions and subdivided into subjects. Each division and subject is allotted a certain number of hours and lectures, recitations or demonstrations and laboratory work. (b) Two years of the course consisting largely of laboratory work in thoroughly equipped laboratories, in charge of full time, thoroughly trained professors. (c) The last two years of the medical course for the most part in properly graded and conducted hospitals and dispensaries, involving clinical work and bedside teaching.

Hospital Course. A large number of state medical boards at this time are demanding as the minimum a year of hospital internship subsequent to graduation from the medical college and prior to the state board examination for license. However, as a matter of practice, some 90 per cent. of the graduates of the better grade of medical colleges are, and have for some years, been taking hospital courses voluntarily.

The above represents in its main features the ideal standard of medical education contended for by the council on medical education when actively taking up this work in 1906. One of the greatest practical factors in the ideal standard today, and the maintaining of the same, is the frequent and thorough inspection and classification of medical colleges. Another important factor is the reciprocal relations existing between the better states in the Union, and which result in a better knowledge of administration methods and promote uniformity of requirements. This inspection is being continued by the Council most efficiently and is a permanent service.

The present standard has been frequently criticised, and the claim is made that this standard is altogether too high. The consequence is that country places and districts are gradually being depleted of medical practitioners through death and removal, that the highly qualified physician of today will not take up practice in the country districts. In Michigan, however, this preference for practice in large centers of population is not confined to the highly qualified graduates. The poorly prepared graduate, in nine cases out of ten, prefers a city having a foreign population in which to settle, and where his methods of practice can not be too closely scrutinized. It is also a question if, at the present time, due to greatly improved roads in every section of the state, the universal use of the motor car by physicians, the improved methods of diagnosis and management of disease, the inexpensive and easy method of obtaining pathological, bacteriological and x-ray reports, the expert assistance possible from the trained or graduate nurse, and other present day advancements too numerous to mention, the same ratio of physicians is necessary today as compared

with ten and fifteen years ago. Michigan today has one physician to 681 of population, Indiana, one to 598, Illinois one to 560, Ohio one to 651, Iowa one to 555, Missouri one to 568, New York one to 670. The average in foreign countries is one physician to 1500 of population. There are this year approximately 6430 students in sixty-eight medical colleges, with accomodation for two thousand more. Under further planned construction already started some 18,000 students can be properly cared for in the sixty-eight medical colleges in the very near future. During the war some six hundred Michigan licentiates received commissions and were called into service. Almost 100 per cent. have returned to the state and have resumed practice, thereby relieving considerably the scarcity of practitioners, which during the influenza outbreak was serious. A large number of highly qualified ex-officers of the late war are coming into Michigan through reciprocal endorsement. Nearly 100 per cent more licenses were issued in 1919 than in the years 1917 and 1918.

In 1904, Michigan had seven Medical schools, counting the schools at Ann Arbor as one institution. During the past decade, five have become extinct. The two remaining schools are credited in every state in the Union, classified as "A Colleges" by the American Medical Association and other Medical Associations and Boards. Raised matriculation requirements have not affected, except temporarily, the number of students registered in the state Medical Colleges.

The legal requirements of the Michigan State Medical Board are very similar and in harmony with the requirements of the Council on Medical Education, with this one exception: In the list of Michigan required high school subjects is Latin. The Council makes Latin an elective subject. As a whole the Michigan list involves in a much greater degree the fundamental in education as compared with the Council's list. This is an interesting difference if we note President-elect Burton's recent address at Grand Rapids, in which he states: "Our schools, as never before, must demand accuracy. From the standpoint of American life as a whole, the problem involved is fundamental. Superficiality is an American vice. Temperamentally, we are not well equipped for patient, thorough going work. Oxford tutors, speaking of American Rhodes scholars, say that they seem to lack accuracy, and, as a rule, the power of a hard grind."

The standard of Medical Education as at present established in the U. S. outlined as above, from the minimum standpoint, represents the extreme thought possible covering length of course. Methods may be devised by which the amount and quality of qualification may be acquired in a shortened course.

Guy L. Connor, Chairman.
V. C. Vaughan.

DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION.

Dr. A. W. Hornbogen, Marquette, presented the report of the Delegates to the American

Medical Association at the meeting held in Atlantic City, June 1919.

The President referred the report to the Business Committee.

Dr. J. D. Brook, Kent, presented the report of the Delegates to the American Medical Association at the meeting held in New Orleans, April 26-30, 1920.

REPORT OF YOUR DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION.

The seventy-first annual meeting of the American Medical Association was held at New Orleans, April 26 to 30, 1920.

In presenting this report your delegates do not intend to go into detail, since stenographic report may be obtained from perusal of the Journals of May 1st and 8th.

There are, however, some topics upon which action was taken to which we desire to call your attention.

COUNCIL ON MEDICAL EDUCATION AND HOSPITALS.

Since 1903 the council has been obtaining information concerning hospitals and hospital problems, until at the present time it has established a definite Bureau on Hospitals, which has a man engaged on full time for this work. The work of the Council is so intimately related with Hospitals in regard to interns and standardization, etc., that the name was changed to the Council on Medical Education and Hospitals. Detailed report on this portion of the Council's report may be found on page 1246 of the May 1st Journal.

COUNCIL ON HEALTH AND PUBLIC INSTRUCTION.

1. The Council came out strongly in favor of a National department of Health and asks two very pertinent questions.

(1) What can the Federal Government do for public health?

(2) What is the Federal Government now doing for public health?

The report says the solution of these questions is fundamental to public health work in this country. One of the strongest points in President Braisted's address was the advocacy of a National department of Health with a cabinet officer at its head. Hubert Work, Speaker of the House, also strongly advocated a separate governmental department of public health in his annual address to the house of delegates.

2. The Council reported that the Harrison law had now been in operation a sufficient length of time to determine its effectiveness, which showed that the purpose for which it had been enacted had failed. At this time we might say that a special committee appointed at the 1919 Atlantic City session reported that only 10 per cent. of the narcotic drugs imported were used for legitimate purposes and that the number of addicts was rapidly increasing due to the failure of the law. The Council criticised the government for using the Harrison law as a means of

securing revenue at the expense of the law abiding physicians, and recommended that we employ every legitimate means to secure a reduction in the license fee. This committee also recommended the elimination of heroin from the physicians armamentarium. To this your delegates objected on the ground that a majority and not a minority of physicians should say what shall be prescribed for their patients or until such time as it shall be definitely proven that heroin has no value as a therapeutic agent.

REPORT OF REFERENCE COMMITTEE ON HYGIENE AND PUBLIC HEALTH.

(1) Inasmuch as advices from the National Tuberculosis Association State that 41 per cent. of patients advised by physicians to go to the southwest were potentially indigent causing much needless suffering and loss of life, it was recommended that in order to check this unnecessary and undesirable migration, physicians throughout the country be urged not to advise their tuberculosis patients to migrate to the health resort states, unless such patients have sufficient funds to properly provide for their necessary care and comfort for at least one year.

(2) Since the promiscuous use by the laity of preforations of the glands of internal secretion has led to manifest harm, it is recommended that the A. M. A. take the necessary steps to prevent any endocrine preparation being sold to the public except on physicians' prescriptions.

Both of these matters were referred to the Council on Health and Public Instruction for investigation and report at the next annual meeting.

(3) By unanimous consent of the House the following resolution was presented.

"Whereas, the House of Delegates of the A. M. A. at the 1917 session at New York, adopted a resolution declaring that alcohol was not a stimulant nor a food, and was of little if any value as a drug for internal administration, and

Whereas, the statement was made during the recent epidemic of influenza, that whiskey was necessary in the treatment of this disease and that avoidable suffering and death was resulting through lack of whiskey for this purpose,

RESOLVED: that the House of Delegates of the American Medical Association reaffirms the resolution adopted in 1917 and further records its opinion that whiskey is not necessary for the proper scientific treatment of influenza."

On motion to adopt, this resolution was lost. On appeal from the decision of the chair it was again brought before the house and lost by substantial majority. On point of order, it was for the third time brought before the house, this time to be tabled on motion of C. J. Whalen of Illinois.

(4) HEALTH INSURANCE.

Far and away the most important and interesting topic of conversation and discussion was Social Insurance. Delegates from various sections of the country came with a dogged determination to put the A. M. A. definitely on record

for or against the proposition. Men of brains loaded for any emergency with arguments and statistics were on the job early and constantly. The monster was corralled on Monday afternoon when Dr. Edward L. Hunt, New York, offered the following resolution, which was referred to the Reference Committee on Hygiene and Public Health.

RESOLVED: that the A. M. A. declares its opposition to the institution of any scheme embodying a system of compulsory contributory insurance against illness or any other scheme which provides for medical service to be rendered contributors or others, provided, controlled, or regulated by any State or the Federal Government." Supported by Drs. C. J. Whalen of Illinois and F. C. Warnshuis of Michigan.

The committee reported the following Tuesday afternoon and recommended that the various resolutions before it, be taken up separately for consideration.

The above mentioned resolution was then adopted unanimously.

Thus occurred the death of the biggest monster that has ever crossed the Atlantic, which threatened to take from the liberty loving people of America their individuality and freedom together with the possible destruction of the science and art of medicine in this country.

The animal being afflicted with an European communicable disease, it was deemed advisable to not defer the funeral. Under the auspices of the delegation from New York funeral arrangements were hastily made and burial took place in one of Louisiana's famous swamps where the carcass will be devoured by the vultures of the air, never again to appear, we hope, until, "The trumpet shall sound and the dead shall be raised incorruptible and we shall be changed."

In reporting this victory or Americanism your delegates feel that they would be negligent in their duty if they did not take cognizance of the work of our State Committee on Civic and Industrial Relation. Its chairman Dr. Frothingham has been an unceasing and tireless worker and has supplied your A. M. A. delegates and various county societies with a large amount of literature and information, and deserves commendation and thanks for the time and energy expended for the good of the cause. Dr. C. J. Whalen of Illinois personally told me that it was simply wonderful the mass of literature and information that had been gathered and distributed by Dr. Frothingham in an incredibly short period of time. Your delegates, therefore, recommend that this house of delegates take official recognition of the valuable services rendered by your Committee on Civic and Industrial relation.

Officers of the Association were elected on the afternoon of April 29th as follows:

President—Dr. Hubert Work, Pueblo, Colo.

Vice-President—Dr. Isadore Dyer, New Orleans, La.

Secretary—Dr. Alexander Craig, Chicago, Ill.

Treasurer—Dr. Wm. Allen Pusey, Chicago, Ill.

Speaker of the House of Delegates—Dr. Dwight H. Murray, Syracuse, N. Y.

Vice-Speaker of the House of Delegates—Dr. F. C. Warnshuis, Grand Rapids, Mich.

Trustees—Dr. Chas. W. Richardson, Dist. of Columbia; Dr. W. T. Sarles, Sparta, Wisconsin; Dr. Walter F. Williamson, Portland, Oregon.

The house of delegates honored Michigan by electing one of the its delegates to the office of Vice-Speaker of the House. Dr. F. C. Warnshuis was unanimously elected to this position because of the activity Michigan has shown pertaining to all matters of progressive constructive legislation, supporting of public health measures, and the standing the profession of Michigan has in the National organization.

The Association adjourned to reconvene in Boston in 1921, definite date to be fixed by the Board of Trustees.

All of which is respectfully submitted

Guy L. Connor,

A. W. Hornbogen,

F. C. Warnshuis,

J. D. Brook,

Delegates.

The President referred the report to the Business Committee.

NEW BUSINESS.

Amendments to Constitution and By-Laws—

The Secretary presented the following proposed amendment to the Constitution and By-Laws:

"That Article IX, Section 1, of our constitution be amended as follows: Strike out the words 'three dollars and fifty cents', and insert the words 'Five Dollars'.

"That Chapter XI, Section 1, of our by-laws be amended by striking out the words 'three and one-half dollars' and inserting therefor 'five dollars' and adding to the first sentence 'and medical defense protection'."

The Secretary announced that the President of the State Society also wished to give notice of a new amendment providing that the Committee on Civic and Industrial Relations, and the Committee on Legislation and Public Policy be made permanent committees, the members to be appointed for certain periods. He requested that the Business Committee report on same.

Dr. R. E. Balch, Kalamazoo, moved that as an amendment under the proper Article a new Section on Public Health be created as a part of the State Society. Seconded and carried, and the President referred the matter to the Business Committee.

MISCELLANEOUS.

Dr. J. D. Brook, Kent, stated that in order not to increase the length of the report of the Delegates to the New Orleans session of the American Medical Association, they had fixed

it up to make it appear that the compulsory health insurance proposition was killed for all time. However, there had been brought to his attention since writing the report the fact that the agitators for compulsory health insurance were still at work and would continue to be, and the Society must continue to be just as active as ever, even though the American Medical Association had upheld their position.

Dr. Udo J. Wile, Washtenaw, said he believed he voiced the sentiments of the majority of the medical men to whom he had spoken regarding the Venereal Law that the intention had fallen far short of fulfillment. The venereal law as it stood today was not being obeyed by the doctors of the State as a whole and they objected to two distinct phases embodied in the law. First, the reporting by name of persons so treated. Second, the labelling of all prescriptions used in the treatment of these cases with the letters C. V. D. Every doctor interested in this matter should be back of a decent, proper law and there should be a law in the State which everyone could properly back. At a recent meeting of the North Carolina State Medical Society Dr. Wile had occasion to take part in a symposium and discuss with the officials there the scheme they have. When their law was first put into effect venereal diseases were supposed to be reported by name. That was unsuccessful and the law now provides that all cases of venereal disease must be reported by number at first, and by name and address if the patients are refractory and refuse treatment. The State law of North Carolina protected in that way the interests of the patient, which Dr. Wile thought the present State law of Michigan did not do. Within the last two weeks he had obtained an opinion from the Dean of the Law Department of the University of Michigan, and to bring the matter to discussion he presented the following preambles and resolutions:

The state law relating to venereal disease is now in such form that compliance with it on the part of physicians of the state is not possible.

The objectionable features of the present law are the reporting of all cases to the State Board of Health by name and the labelling of prescriptions with the letters C. V. D.

A broader interpretation of the existing law by the state department of health would render it effective and easily obeyed.

An effective method for dealing with this situation is that found in the present law of the state of North Carolina, which provides that venereal cases must be reported and leaves the method of reporting outlined by a set of rules formulated by the state board of health.

This set of rules provides that cases of venereal diseases must be reported to the state board of health by number and further that where cases are refractory to treatment or refuse such they must be reported by name and address. This law has the unanimous backing of the profession of the state of North Carolina.

Resolved that it be the sense of the house of delegates of the Michigan State Medical Society that the existing law be interpreted more liberally for the protection of those patients who do not endanger public health, along the lines outlined above; namely, that the state board of health interpret the present law by a set of rules which shall require the reporting of venereal disease by number, except in cases where patients are refractory or refuse treatment and are thus a menace to public health.

Further be it resolved that it be the sense of the house of delegates of the Michigan State Medical Society that the state board of health in its set of rules does not include the labelling of prescriptions with the letter C. V. D.

The President suggested that a committee of three might be appointed to take up this matter and report back and asked for a motion to that effect.

Dr. J. D. Brook, Kent, moved that the President appoint a committee of three to take this matter under advisement. Supported by Dr J. A. Wessinger, Washtenaw. Carried.

The President thereupon appointed the following committee:

Dr. Guy L. Kiefer, Wayne, Chairman.

Dr. A. H. Rockwell, Kalamazoo.

Dr. Otto L. Ricker, Cadillac.

The Secretary announced that the Chairman of the Business Committee wished that committee to meet immediately after the adjournment of the House of Delegates.

There being nothing further to come before the House at this time on motion the meeting adjourned, to reconvene at 7:00 P. M.

SECOND SESSION.

The second session of the House of Delegates of the Fifty-fifth Annual Meeting of the Michigan State Medical Society was called to order in the First Congregational Church of Kalamazoo, at 7:30 P. M., Tuesday, May 25, 1920.

The President, Dr. Charles H. Baker, Bay City, presiding.

REPORT OF CREDENTIAL COMMITTEE.

Dr. J. H. Dempster, Wayne, presented the report of the Committee on Credentials.

A quorum of the House of Delegates being present, the President declared the session of the House open for regular business.

BUSINESS COMMITTEE.

Dr. F. B. Walker, Wayne, Chairman of the Business Committee presented the following report:

"Mr. President and Members of the Society: Your Business Committee met at the Hotel Burdick at 4:00 P. M. Present: Entire Committee.

1. The Committee requests constitutional authority for its existence and a definition of its function.

2. The financial report of the Council is ample and detailed but bears no certification of having been audited. If such an audit has not been made the Business Committee recommend that it be done. If it has been done the Committee recommend the acceptance and approval with adoption of the report.

3. In regard to the recommendation of a state-wide campaign by counties, your Committee approves and recommends the institution of that campaign, but recommends that it be carried out by Councillor districts instead of by counties, and that each Councillor be held responsible for the campaign in his own district, he is to have the power to secure such help as he needs.

4. The Business Committee endorses the recommendation of the Council in providing designated representatives to go to Lansing, if necessary, in the interest of the profession in circumventing legislation for health insurance and other legislation, their expenses to be paid by the Society.

5. The Business Committee endorses the adoption by the Society of the recommendations of the Council as to the proposed amendments to article ix of the Constitution and Chapter xi of the By-Laws concerning annual fees.

6. The Business Committee also approves the recommendation to appoint a committee to bring the Constitution and By-Laws up to date as acted on by the Society.

7. The recommendation of the Secretary's office as a clearance bureau for physicians is concurred in.

8. The recommendation for District Clinics is referred again to the Council for a more definite plan.

9. The Business Committee heartily endorses the report and recommendations of the Committee on Civic and Industrial Relations.

10. The report of the Committee on Tuberculosis is commended and recommended for adoption by the House of Delegates.

11. With regard to the recommendation of the Medico-Legal Committee in regard to the paying of indemnities by the Society, your Business Committee believes that a definite plan with its effects on the Society and its membership should be submitted.

12. The report of the Committee on Venereal Prophylaxis is approved.

13. The Business Committee recommends the acceptance and placing on file of the reports of the Delegates of the Society to the meetings of the A. M. A. for 1919 and 1920, and the adoption of the recommendation made therein.

14. The Business Committee approves the recommendation of the President concerning tenure of committceship of the Committee on Civic and Industrial Relationship, and submit the following changes in Section 14, to read:

The Committee on Industrial and Civic Relationship shall consist of nine members, three of whom shall be appointed for one year, three for two years and three for three years, and thereafter for three years each, vacancies to be filled by the President of the Society as occasion demands.

15. The Business Committee recommends the appointment by the President of a committee of three to attend the next meeting of the State Teacher's Association in the interest of Health Problems.

Respectfully submitted:

F. B. Walker

V. J. Rickard

G. F. Young

A. C. MacKinnon

J. H. Burley

Business Committee.

Dr. Walker stated that this report covered all except the matter of the Section on Public Health, which would be presented separately.

Dr. Walter J. Wilson, Wayne, moved that the report be taken up section by section. Supported by C. E. Simpson, Wayne. Carried.

The Secretary read the first section of the report of the Business Committee:

Dr. C. D. Brooks, Wayne, moved that the inquiry of the Committee as to its duties be referred to the Committee on revision of the Constitution and By-Laws. Seconded by Dr. R. H. Nichols, Ottawa. Carried.

The Secretary read the second section of the report of the Business Committee.

Dr. R. E. Mercer, Wayne, moved its adoption. Supported by R. C. Andries, Wayne. Carried.

The Secretary read the third section of the report of the Business Committee.

Dr. Udo J. Wile, Washtenaw, moved its adoption. Supported by Dr. C. D. Brooks, Wayne.

The Secretary explained that the only thought in the campaign was that on May 1st, there were paid up memberships of 2584 members. There were approximately 3500 eligible physicians in the State of Michigan who could become members. The normal paid up membership was about 2700, leaving about 800 men who could become members. In the report of the Council as given the thought was advanced to have, during the month of October a membership drive, not only for numerical strength but for the influence they would be able to exert when they could say that they had 99 or 100 per cent. of the profession back of this or that movement. This would be an advantage. A large portion of the men who were not members had never been approached. Many had moved into new neighborhoods. So it was thought that if a centralized campaign could be devoted to this purpose, with the authority of the House of Delegates to go to the County Societies and ask them to conduct such a campaign, by the first of January when the Legislature came into session the profession could have a unified front for the adoption of any measure they might wish to present. This was the idea of bringing into the membership fold the men who were not members because of carelessness in neglecting to invite them to become members, or because they had moved into new neighborhoods.

Dr. C. J. Ennis, Chippewa, suggested that the Councillors should be paid for their expenses and trouble in this connection. Otherwise it would be hard to get men to do this work in the large districts.

The Secretary stated that it was customary to pay the Councilors for work done in connection with the Society in this way.

Dr. F. B. Marshall, Muskegon, moved the adoption of Section 3. Supported by several and carried.

The Secretary read the fourth section of the report of the Business Committee.

Dr. J. A. Wessinger, Washtenaw, moved its adoption. Dr. J. H. Dempster, Wayne, seconded.

Dr. C. E. Simpson, Wayne, offered as an amendment that the Council be empowered to defray the necessary expenses of such delegates as were legislative representatives of the Society from the funds of the Society.

Dr. F. B. Walker stated that the Committee had this in mind, but thought the Council would have the authority to defray whatever expenses were necessary.

Amendment voted and carried.

Motion voted as amended and carried.

Sec. 5. C. D. Brooks, Wayne, moved adoption. Seconded, carried.

Sec. 6. J. A. Wessinger, Washtenaw, moved adoption. Seconded, carried.

Sec. 7. R. H. Nichols, Ottawa, moved adoption. Seconded, carried.

Sec. 8. J. A. Wessinger, Washtenaw, moved adoption. Seconded, carried.

Sec. 9. W. J. Wilson, Wayne, moved adoption. Seconded, carried.

Sec. 10. C. E. Simpson, Wayne, moved adoption. Seconded, carried.

Sec. 11. F. B. Marshall, Muskegon, moved adoption. Seconded, carried.

Sec. 12. J. E. Davis, Wayne, moved adoption. Seconded, carried.

Sec. 13. F. J. Lee, Kent, moved adoption. Seconded, carried.

Sec. 14. C. D. Brooks, Wayne, moved adoption. Seconded, carried.

Sec. 15. R. C. Andries, Wayne, moved adoption. Seconded, carried.

Dr. R. H. Nichols, Ottawa, moved the adoption of the report as a whole. Supported by Dr. C. E. Simpson, Wayne. Carried.

Dr. F. J. Lee, Kent, moved that a vote of thanks be extended to Dr. G. E. Frothingham for his excellent work as Chairman of his Committee. Supported by several and carried.

COMMITTEE ON VENEREAL LAW.

Dr. Guy L. Kiefer, Wayne, Chairman of the Committee appointed by the President to report on the State Venereal Law presented the following report:

"To the House of Delegates of the Michigan State Medical Society—Gentlemen: Your Committee to whom was referred Dr. Wile's resolution with reference to the State Venereal Law desires to respectfully report as follows:

Resolved,

1. That the State Council of Health be requested to so amend their rules and regulations for venereal disease that doctors shall be required to report such cases by case number, initials, or name and address except in cases where patients are refractory and refuse treatment and are thus a menace to the public

health. In such latter cases the report shall be by name and address.

2. That the State Council of Health be requested to use its influence to have Section v (referring to the writing and filing of prescriptions) so amended that it will require the number or initials of the patient instead of the name, and that physicians may be allowed to dispense medicine to such patients when they find it necessary, provided that the physicians keep a record of the medicines thus dispensed.

3. That the members of the State Medical Society be requested to aid the State Council of Health in their endeavor to secure such amendment as outlined above.

Respectfully submitted.

Guy L. Kiefer, Chairman.

Otto L. Ricker.

Dr. Udo J. Wile moved the adoption of the report, and a vote of thanks to the Committee for the expeditious way in which the matter had been handled. Supported by several members and carried.

HOSPITAL COMMITTEE.

The Secretary presented the following report on Hospital Standardization, which had been sent by mail.

Officers and Members, State Medical Society.
Sirs:

I am herewith enclosing the Committee's report on Hospital Investigation, a copy of which has also been mailed to the American Medical Association. The report of the Committee has required a lot of hard work which may not show in the enclosed report, but there was a lot of preliminary work which required much time by investigation. The Committee feels free in making the following recommendation to the State Society.

Namely: That the investigation of hospitals is a job that is entirely too much to be expected of a group of busy physicians, both from time and financial sacrifice. To be properly done, it would require six months of continuous labor, conservatively estimated, to investigate and report hospital conditions in the State. We would suggest further that a fund or budget be provided or established to employ an ex-hospital-superintendent, a doctor or nurse, who is familiar with what is required to make a hospital in Class A. We believe this could be done for the sum of \$150 or \$200 per month, and the work could be finished in six months. Furthermore the report received from this source would be more thorough, unbiased, and accurate.

Hoping the report and recommendation meet with your approval, I remain,

Yours respectfully,

GEO. L. LE FEVRE, Chairman.

The President referred the report to the Business Committee.

UNFINISHED BUSINESS.

Amendments to Constitution and By-Laws—

The Secretary read the following proposed amendment to the Constitution and By-Laws:

"That Article IX, Section 1, of our Constitution be amended as follows: Strike out the words 'three dollars and fifty cents,' and insert the words 'Five Dollars'."

Dr. Walter J. Wilson of Wayne moved the adoption of this amendment. Supported by Dr. J. A. Wessinger of Washtenaw. Carried.

"That Chapter XI, Section 1, of our By-laws be amended by striking out the words 'three and one-half dollars' and inserting therefor 'Five Dollars', and adding to the first sentence 'and medical defense protection'."

Dr. R. H. Nichols, Ottawa, moved the adoption of this amendment. Supported by Dr. C. D. Brooks, Wayne. Carried.

The Secretary asked whether or not the Chair would rule that the time from one meeting of the House of Delegates to the next meeting was as one day. At former meetings it had been necessary to have only one meeting of the House of Delegates each day.

The President ruled that it was one day between sessions of the House of Delegates, and asked that the House sustain this ruling.

Dr. R. E. Mercer moved that ruling be sustained. Supported by several and carried.

The Secretary read the proposed amendment as presented by the Business Committee: "The Business Committee endorses the recommendation of the Council in providing designated representatives to go to Lansing, if necessary, in the interest of the profession in circumventing legislation for health insurance and other legislation, their expenses to be paid by the Society."

Dr. J. A. Wessinger, Washtenaw, moved its adoption. Supported by Dr. C. E. Simpson, Wayne. Carried.

NEW BUSINESS.

Dr. J. D. Brook, Kent, said it had been proposed by the four delegates to the A. M. A. from the State of Michigan that he should look up the Constitution and By-Laws with the idea of establishing in the House of Delegates of the State Society the offices of Speaker and Vice-Speaker. To that end he submitted the following changes in the Constitution and By-Laws:

That Section 1, Article VIII, under "Officers", shall read, "The officers of this Society shall be a President, four Vice-Presidents, a Secretary, a

Treasurer, a Speaker and Vice-Speaker of the House of Delegates", the rest of Section 1 to remain unchanged.

That Section 2 be changed to read "The President and Vice-Presidents, the Speaker and Vice-Speaker of the House of Delegates shall be elected for a term of one year", the balance of Section 2 to remain unchanged.

That Section 3 of the same Article shall be changed to read, "The officers of this Society not otherwise elected, shall be elected by the House of Delegates on the morning of the last day of the Annual Session; but no Delegate shall be eligible to any office named in the first Section, except that of President or Councilor, Speaker and Vice-Speaker", the rest of Section 3 to remain unchanged.

That Chapter VII, Section 1, of the By-laws, be changed to read, "The President shall preside at all general meetings of the Society; shall appoint all committees not otherwise provided for; shall fill all vacancies not otherwise provided for occurring by reason of death, disability or removal of any officer, Councilor, or member of any committee, occurring during the fiscal year of the Society; shall deliver an annual address at such time as may be arranged; shall give a deciding vote in case of a tie, and shall perform such other duties as custom and parliamentary usage may require. He shall, as far as practicable, visit by appointment the various sections of the State and assist the Councilors in building up the County Societies and in making their work more practical and useful." The balance of Section 1, Chapter VII, to be stricken out.

An additional Section to Chapter VII of the By-laws to be known as Section 6, shall read, "The Speaker shall preside at all meetings of the House of Delegates, and shall appoint all committees pertaining to the proper functioning of the House of Delegates. At least one month before the Annual Session he shall appoint a committee of three on credentials, whose report shall be the first order of business of the first session of the House of Delegates."

These changes were submitted for action by the House of Delegates. Dr. Brook moved that the matter be referred to the Committee on amendment of the Constitution and By-Laws. Supported by Dr. D. A. Cameron, Alpena. Carried.

The Secretary announced that the Council had nominated the following gentlemen for honorary membership in the Society:

Dr. Frank N. Turner, Lansing.

Dr. James D. Munson, Traverse City.

Dr. Eugene Boise, Grand Rapids.

Dr. William Fuller, Grand Rapids.

Dr. Theo. A. McGraw, Detroit.

For non-resident honorary membership—

Dr. Hubert Work, Pueblo, Colorado.

Dr. Frank Smithies, Chicago, Illinois.

There being no further business at this time the session adjourned to reconvene at 8:00 A. M. Wednesday.

THIRD SESSION.

The third session of the House of Delegates of the Fifty-fifth Annual Meeting of the Michigan State Medical Society was called to order in the First Congregational Church of Kalamazoo, at 8:20 A. M., Wednesday, May 26, 1920.

The President, Dr. Charles H. Baker, Bay City, presiding.

REPORT OF CREDENTIALS COMMITTEE.

Dr. J. H. Dempster, Wayne, reported that there were forty-six delegates present, and thirty-one districts not represented.

A quorum of the House of Delegates being present, the President declared the session of the House open for regular business.

REPORT OF BUSINESS COMMITTEE.

Dr. F. B. Walker, Wayne, Chairman of the Business Committee, presented the following report: "Mr. President, and Members of the Society: Your Business Committee met at the Hotel Burdick at 8:30 P. M.

1. The recommendation of President Baker that the tenure of committeehip of the Committee on Legislation and Public Policy be made for a longer period than one year is endorsed by the Business Committee, and it is hereby recommended that the first clause of Section 3 of the By-laws be changed to read as follows: "The Committee on Public Policy and Legislation shall consist of three members appointed by the President, one for one year, one for two years and one for three years, and thereafter one for three years each, vacancies to be filled as they may occur." The balance of the Section to remain as it is now.

2. The subject of the institution of a new Section on Public Health Work has been under advisement. The Committee is assured that ten members of the Society have asked that this section be created and that thirty-five more members, whose names are attached hereto, are interested in it. Under these circumstances your Committee recommends the establishment of such a Section, and that the following be added to Section 10 of the By-laws: Fifth—A Section on Public Health Work.

3. The report of the Hospital Committee shows an earnest endeavor to perform a laborious but important task, and the work already done deserves the thanks of the Society. Your Business Committee has taken under consideration the proposition of the Hospital Committee to employ an expert for the purpose for six months. We know that the American College of Surgeons is now engaged in this same investigation, and will this year publish their rat-

ings of all hospitals of 100 beds or more and will undoubtedly complete their investigation of smaller hospitals next year. Under these circumstances your Business Committee believes the expenditure of a large sum of the Society's funds for that purpose is unnecessary and would only duplicate a difficult job. We do, however, recommend the continuance of the Committee until the work shall have been completed.

Respectfully submitted.

F. B. Walker, Chairman.

V. J. Rickard,

G. F. Young,

A. C. MacKinnon,

J. H. Burley.

Business Committee.

Dr. J. H. Dempster, Wayne, moved that the report be taken up section by section. Supported by Dr. H. A. Wessinger, Washtenaw, Carried.

The Secretary read the first section of the report of the Business Committee.

Dr. C. D. Brooks, Wayne, moved its adoption. Supported by Dr. W. L. Finton, Jackson; carried.

The Secretary read the second section of the report of the Business Committee.

Dr. F. N. Blanchard, Wayne, moved its adoption. Supported by Dr. C. S. Wilson, Wayne; carried.

The Secretary read the third section of the report of the Business Committee.

Dr. J. A. Wessinger, Washtenaw, moved its adoption. Seconded by several members.

Discussed by Dr. F. B. Marshall, Muskegon.

Dr. W. J. Anderson, Iron Mountain, thought it would be well for the Society to recommend to the College of Surgeons that they make no report on hospitals until a complete investigation had been made. Otherwise, it would work a hardship on the small hospitals.

The Secretary explained that this work was an integral part of the American Medical Association; that the Association has a Council on Medical Education and Hospitals, and has a definite plan for such investigation. It was advisable that the State Medical Society should have a representative committee watching this work and co-operating with the parent organization.

Motion voted and carried.

Dr. J. D. Brook, Kent, moved that the report as a whole be adopted. Supported by several members; carried.

Dr. D. H. Burley, Lapeer, moved that the Committee on Hospitals attend the meeting of the State Hospital Association in Detroit, and

that their expenses be paid by the Society. Supported by several members; carried.

UNFINISHED BUSINESS.

The Secretary read the amendment to the By-Laws as presented by the Business Committee:

"That the first clause of Section 3 of the By-laws be changed to read as follows: 'The Committee on Public Policy and Legislation shall consist of three members appointed by the President, one for one year, one for two years, and one for three years, and thereafter one for three years each, vacancies to be filled as they may occur.'"

Dr. C. S. Wilson, Wayne, moved its adoption. Supported by several members; carried.

"That the following be added to Section 10, Chapter IV, of the By-laws: Fifth—A section on Public Health Work.

Dr. J. A. Wessinger, Washtenaw, moved its adoption. Dr. Udo J. Wile supported; carried.

NEW BUSINESS.

The Secretary read the following communication from Councilor W. G. Bird of Flint:

"To the Council of the Michigan State Medical Society:

Gentlemen:

Owing to business duties outside of my profession I find that I am unable to give the necessary time to the work a Councilor should do; so feel it my duty and for the good of the Michigan State Medical Society that I tender my resignation as Councilor of the Sixth District to take effect at once.

Sincerely yours,

May 25, 1920.

(Signed) W. G. Bird."

The President instructed the Nominating Committee to nominate a candidate to fill Dr. Bird's place.

Dr. J. A. Wessinger, Washtenaw, offered the following proposed change in the Constitution:

"Article VIII. Officers.

Section 2. The President and Vice-Presidents shall be elected for a term of one year; the Secretary and Treasurer shall be elected by the Council at its annual meeting in January and shall hold their offices for one year. The councilors shall be elected for terms of six years; these terms being so divided that four councilors shall be chosen each alternate year. There shall be one councilor for each councilor district and election to the office shall be from a list of nominees submitted by the component societies of the councilor district from which the councilor is to be chosen, each society having the privilege of submitting one name. No councilor shall be eligible to succeed himself. All of these

officers shall serve until their successors are elected and installed."

The President referred this to the Committee on Constitution and By-Laws.

TRAINING OF NURSES.

Dr. C. D. Brooks, Wayne, introduced the subject of the nurses training course and stated that after considerable close contact with the training school in connection with Harper Hospital, he felt that the time had come when the Society should go on record in recommending that the training school course should be shortened from three to two-and-a-half years. In his opinion it would not be necessary to change the entrance qualifications; if they desired high school or college graduates that could be left to a committee. The shorter course would take away the hardship that it was for some young women to spend the extra time in the hospitals. He believed we would have just as efficient nurses, the nurses would not have their health destroyed, as often happens, and they would be able to get nurses for their patients. Many girls would come in for the shorter term that would not come for the three year course. Dr. Brooks therefore recommended to the House of Delegates that the training school course in the hospitals of Michigan be shortened to two years.

Supported by Dr. R. S. Ramsdell, Manistee.

Dr. Udo J. Wile, Washtenaw, asked if the two year course would meet with the state law requirement for nurses.

Dr. C. D. Brooks, Wayne, said if it did not meet with this requirement it would be well to change the state legislation.

Dr. R. E. Mercer, Wayne, said there was another thing to consider. The hospitals would immediately need one-third more nurses because those going out instead of spending three years would only spend two. He thought there should be another class of nurses, trained surgical nurses who spent an extra year in the hospital. Some of them gave very poor service, and he believed there should be two classes, the ordinary trained nurse and the specially trained surgical nurse who took an extra year if they had special ability in that line.

Dr. J. A. Wessinger, Wayne, said that Deaver once said that surgeons were born, not made. He believed it was the same with nurses; some will never be trained nurses and some are nurses the minute they take hold of the work.

Dr. W. J. Anderson, Dickinson, thought that everything was in favor of the large hospitals. The small hospitals of thirty-two beds or thereabouts could not afford to employ graduate nurses to take care of the patients. They have a class of nurses that they call assistants to trained nurses; they give them a course of a year and believe they will be practical nurses when

they get through. They cannot afford to run the two year course but hospitals must exist in this country and they cannot exist with the present conditions regarding nurses.

Dr. R. S. Ramsdell, Manistee, said that hospitals of fifty beds were up against the same proposition. Some of his best nurses have been in the hospital only six months and the ones who have the natural ability for surgical work are being used for that. He thought it was necessary to use judgment as to ability rather than length of training. With a serious surgical case he picked out the nurse who was capable of taking care of the case instead of those who had been in training longer but had less ability. In his opinion there was no need of having two classes of nurses any more than two classes of doctors. If a nurse gets what is considered a proper length of time, for example two years, why should there be another class of nurses? If they were good in surgery or obstetrics they would know it by that time. In the small towns there was always the problem of getting girls and the three year course stopped them. Factories pay \$27.00 a week without any training. They could get girls for two years in the hospitals if they love the work, but not for three years. He was heartily in favor of a two year course, but not of a divided class of nurses, for in his opinion that would make trouble.

Dr. D. H. Burley, Lapeer, thought it would not be advisable to have two classes of nurses. At a recent conference on nursing which he had attended the Governor had said that he would pass the practical nurses, but Dr. Burley thought this was not wanted for practical nurses always knew more than the doctors, while well trained nurses were the best of assistants. Some hospitals had started a campaign to put money into a fund for nurses, and were collecting a dollar a bed for this purpose.

Dr. Rolland Parmeter, Wayne, stated that the civic or municipal hospitals were establishing a two year training school, which they thought the law allowed. This will provide for the small hospitals, for they will accept nurses in the municipal training school and give them one year's credit for work in small hospitals. In his opinion when nurses enter training they should be given an honorarium, perhaps fifteen to twenty dollars a month. They should be given their laundry and clothing as well as their board, and enough money to take care of their incidentals so that they would be free from their families from the time they entered training.

Dr. C. D. Brooks, Wayne, said that one very important factor both in small hospitals and in large was the matter of advertising. If they would take the one dollar per bed that the hospital would pay, or half of that money and give it to a good firm of advertising men the hospitals would be so filled that it would be necessary to build additions. Another thing was, and this was not recognized by the small hospitals, that this was the best matrimonial school in the country (laughter). Dr. Brooks thought that with the exception of Dr. Mercer he had

provided more good wives than any other place in the country, and they would be good nurses for a year (laughter). If this was mentioned in the advertising there would be no difficulty in having the hospitals full.

President Baker said that in his town the trouble was to get girls who had had sufficient schooling to understand what was being said to them by the lecturers who had the training to do. They were compelled to compete with the factories that offered larger wages than the hospital could offer or the girls could earn after a three year course. He had observed that for the first year the girls who came into training were usually used as scrub women. That was not training nurses and the girls should not be asked to spend a year in manual service when this could be used for regular service and they would get as much training in two years as they now obtained in three years. The nature of the training, he thought, was at fault. In his opinion the adaptability for nursing was just as necessary for finer results as the adaptability for the practice of medicine. He thought it would be unfair for the girls who had spent three years in training to allow other girls who had spent only two years to come into the same standing with the public. It would be well if some means could be devised for a distinction between the girls who had two and the girls who had three years training. This would only be common justice to the ones who had spent three years in the hospital. As far as the public was concerned, they would not know the difference between six months and three years in most instances. It was necessary that something should be done to increase the number of girls who were willing to take up nursing and he thought the advertisement scheme was the best. The nurses were like the doctors, they did not know how to sell their service.

Dr. Brooks' motion was voted upon and carried.

Dr. Joshua G. R. Manwaring, Genesee, presented a communication from the Genesee County Medical Society suggesting that the Michigan State Medical Society appoint a full time director of medical education and increase the dues sufficiently to cover this expense.

Dr. W. J. Wilson, Wayne, moved that the communication be referred to the Committee on Industrial and Civic Relations. Supported by Dr. Udo J. Wile; carried.

The President introduced Dr. Hubert Work, Pueblo, Colorado, President of the American Medical Association, to the Society. (Applause.)

Dr. Work: Mr. Chairman, Members of the House of Delegates: It seems to come very easy to me to address a body of medical men as members of the House of Delegates (laughter). I have had a good deal of experience and spent much time in that delightful occu-

pation. Those men do not look much different from you men, and I am sure do not look any brighter. You can get that idea by remembering the men you send from this Association to the House of Delegates of the A. M. A. (Laughter). I might say in that connection that no recognition, or any experience of my life, ever afforded me the pleasure that it did to preside over the House of Delegates of the American Medical Association. They are a type by themselves. They cannot be deceived for a moment. They are guided by their idea of what is right, many of them a little tenacious at times, and all have to be shown. He must make himself and them believe, at the time at least, that he is honest. If he has done that he is perfectly safe, but I verily believe that no mere man could preside over that House of Delegates for two successive terms if he attempted to put anything over. It simply could not be done. (Laughter.)

I will not take up any of your time. It has been a pleasure to speak to you and I am sure this House of Delegates can be depended upon to send just such men to the House of Delegates of the A. M. A. (Applause.)

There being nothing further to come before the House of Delegates at this time, on motion the session adjourned to reconvene at eight A. M. Thursday.

FOURTH SESSION.

The fourth session of the House of Delegates of the Fifty-fifth Annual Meeting of the Michigan State Medical Society was called to order in the First Congregational Church of Kalamazoo, at 8:30 A. M., Thursday, May 27, 1920.

The President, Dr. Charles H. Baker, Bay City, presiding.

REPORT OF CREDENTIALS COMMITTEE.

The Chairman of the Committee on Credentials announced that a quorum was present, and the President declared the session of the House open for the transaction of regular business.

UNFINISHED BUSINESS.

Clinical Meetings: The Secretary announced that the House of Delegates had referred back to the Council the question of regional clinics. To give the plan concretely, there was more or less of a demand for clinical meetings among the County Societies. At present there were no means of getting men who could conduct such meetings. Recently at Cadillac a clinical meeting had been arranged and Dr. Wile went up and took charge of it. The men said they did not know that so many skin cases existed as were presented by Dr. Wile, who discussed their diagnosis, prognosis, and treatment. It was a most profitable meeting. They wished to arrange

to have similar meetings every three months on some such plan as was in vogue in Illinois, Wisconsin, and several other states. The State Society arranges a faculty, so-called, of men who are recognized as able clinical teachers and who can go into a community and conduct a clinic on cases brought up by the members. Clinics can be given on chest, heart, lung, eye, or skin diseases, etc., and have a two or three day session. If the County Societies could arrange such a clinic and notify their members they could secure these men to hold the clinic and it would make the men better diagnosticians and help them with their private practice. That was the thought of the extension clinical course. The Council comes back to the House of Delegates with the request that they appoint the Committee, or authorize the President to appoint the Committee, that will arrange and prepare some schedule or plan of such clinical meetings. This could then be announced to the County Societies so that they could arrange for these meetings during the summer or winter months, whenever they wished. In Minnesota they have such a course that emanates from the University of Minnesota, but the plan did not mean that it would be necessary to employ the men connected with the University of Michigan, but men known to be capable in conducting a clinic.

Dr. Isaac L. Spaulding, Lenawee, moved that the House of Delegates recommend to the President that he appoint a committee of five to arrange for such a course of clinics. Supported by several members; carried.

NEW BUSINESS.

Dr. J. D. Brook, Kent, said that the House of Delegates had not gone officially on record against compulsory health insurance. All it had done was to adopt the report of the Committee on Industrial and Civic Relations and the report of the delegates to the American Medical Association, both of which were against it. He presented the following resolution to put the House of Delegates definitely on record against compulsory health insurance:

"Whereas: The American Medical Association at its Annual Meeting held in New Orleans this past April through its House of Delegates, unanimously adopted the following resolution:

'Resolved: That the American Medical Association declare its opposition to the institution of any scheme embodying a system of compulsory contributory insurance against illness, or any other scheme which provides for medical services to be rendered contributors or others, provided, controlled or regulated by any State or the Federal Government.'

"Whereas: The propaganda in favor of compulsory health insurance is being disseminated through various channels for the purpose of forcing such legislation in Michigan;

"Therefore be it resolved: That the House of Delegates of the Michigan State Society, repre-

senting 3,000 reputable physicians of this State, hereby endorses and concurs in the resolution adopted by the American Medical Association and reiterates the opinion therein expressed.

"Second: That we record our disapproval of every effort expended to endeavor to thrust upon our State any such plan for compulsory health insurance in Michigan.

"Third: That we hereby record it as our opinion that such form of legislation is uncalled for, and that our State needs warrant no such enactments.

"Fourth: That our component County Societies memorialize our State Senators and Representatives so as to not only acquaint them with the facts, but also request their support to defeat any such legislation that may be attempted."

Dr. Brook moved the adoption of these resolutions. Supported by Dr. C. D. Brooks, Wayne; unanimously carried.

REPORT OF NOMINATING COMMITTEE.

Dr. Walter J. Wilson, Chairman of the Nominating Committee, presented the following report:

1. The Nominating Committee recommends the acceptance of Bay City's invitation to meet there in 1921.

Dr. F. J. Lee, Kent, moved the adoption of this recommendation. Supported by Dr. A. C. MacKinnon, O. M. C. O. R. O.; carried.

2. The following are nominated for their respective offices:

1st Vice-President—Dr. A. W. Crane, Kalamazoo.

2nd Vice-President—Dr. Udo J. Wile, Ann Arbor.

3rd Vice-President—Dr. C. M. Williams, Alpena.

4th Vice-President—Dr. F. McD. Harkin, Marquette.

Principal delegates to the American Medical Association:

Dr. Guy Connor, Detroit, with Dr. Walter J. Wilson, alternate.

Dr. J. D. Brook, Grandville, with Dr. R. H. Nichols, Holland, alternate.

Dr. A. W. Hornbogen, Marquette, with Dr. F. W. Scholter, Munising, alternate.

As Councilor 6th District, to succeed Dr. W. G. Bird, resigned—Dr. H. E. Randall, Flint.

As member Board of Medico-Legal Committee, to succeed Dr. Angus McLean, term expired, Dr. Frank B. Walker, Detroit.

As Resident Honorary Members:

Dr. William Fuller, Grand Rapids.

Dr. T. A. McGraw, Sr., Detroit.

Dr. F. N. Turner, Lansing.

Dr. J. D. Munson, Traverse City.

Dr. Eugene Boise, Grand Rapids.

As Non-Resident Honorary Members:

Dr. Hubert Work, Pueblo, Colorado, President-Elect of the American Medical Association.

Dr. Frank Smithies, Chicago, Illinois.

Respectfully submitted.

C. J. Ennis.

R. H. Nichols

W. J. Wilson, Jr., Chairman.

Dr. Isaac L. Spaulding, Lenawee, supported by Dr. C. S. Wilson, Wayne, moved that the Secretary be instructed to cast the ballot of the Society for the election of the men presented by the Nominating Committee. Carried.

The Secretary reported the ballot cast, and the nominees were declared duly elected.

Dr. C. D. Brooks, Wayne, moved that a vote of thanks be extended to the entire medical profession of Kalamazoo, and all those who had any part in the entertainment of the Society, particularly to the Presbyterian ladies who gave the dinner on Wednesday night. Supported by Dr. C. J. Ennis, Chippewa, and unanimously carried.

As this concluded all the business to be disposed of by the House of Delegates, the session adjourned *sine die*.

F. C. Warnshuis, Secretary.

MICHIGAN ASSOCIATION OF INDUSTRIAL PHYSICIANS AND SURGEONS.

At the meeting of the State Medical Society at Kalamazoo, Michigan, physicians and surgeons interested in Industrial Medicine and Surgery met on May 26, in the auditorium of the Congregational Church.

The meeting was called to order by Dr. H. N. Torrey of Detroit, who stated the object of the meeting as follows:

Gentlemen:

This meeting is called in compliance with a demand of many of the State profession to organize a Michigan Association of Industrial Physicians and Surgeons. I am sure it will be the unanimous opinion of those present today that such an organization can be made of the utmost value, not only to the profession, but to the State along the lines of Medical Service to the Industries.

I will not take your time in going over the history of the rapid advances made during the last few years by Industrial Medicine and Surgery. Dr. Mock, in his paper today, will tell

something of this astounding development, and at the same time he will give us some ideas as to how we can still further this work especially in Michigan. Suffice to say, Industrial Medicine and Surgery has advanced from a small unimportant offshoot of Medicine to one of the most important and largest of its specialties. The profession throughout the country are alive to it, as shown by the numerous organizations which have sprung up by the Medical Schools which have installed Industrial Departments, and by the great interest shown everywhere in Medical circles. The various States are realizing the enormous wastage of their greatest asset, man power, and are taking measures to correct it—the employer and employee are demanding skilled, scientific service and by specially trained men.

Gentlemen—the opportunity in Michigan is before us, and it is a wonderful one. Let us organize a Society which, besides meeting once a year and reading papers, will be an important factor in the furtherance of this great work in our own State. Let us cooperate with the State, with the Employer and the Employee in saving this the greatest of all assets—the man power of our Nation. We must see that our Medical Schools train men for this Special Work. We must do our share in this great field, and I must say our share and responsibilities are enormous. I cannot put the objective of our proposed organization in better words than those given in the Constitution of the American Association of Industrial Physicians and Surgeons. I quote “The object of this Association shall be to foster the study and discussion of the problems peculiar to the practise of Industrial Medicine and Surgery; to develop methods adapted to the conservation of health among workers in the industries; to promote a more general understanding of the purposes and results of the medical care of employees; and to unite into one organization members of the medical profession specializing in industrial medicine and surgery for their mutual advancement in the practice of their profession.” It is to be earnestly recommended that as a State Society we apply for membership in the National Association.

Dr. Dan H. Eaton of Kalamazoo was appointed temporary secretary.

The Constitution and By-Laws of the Michigan Association of Industrial Physicians and Surgeons drawn up Drs. Torrey and Warnshuis were read and adopted.

CONSTITUTION AND BY-LAWS OF THE MICHIGAN ASSOCIATION OF INDUSTRIAL PHYSICIANS AND SURGEONS.

ARTICLE I.—Name.

The name and title of this organization shall be, The Michigan Association of Industrial Physicians and Surgeons.

ARTICLE II.—Object.

The object of this Association shall be to foster the study and discussion of the problems peculiar to the practice of industrial medicine and surgery; to develop methods adapted to the conservation of health among workers in the industries; to promote a more general understanding of the purposes and results of the medical care of employees and to unite into one organization members of the medical profession specializing in industrial medicine and surgery for their mutual advancement in the practice of their profession.

ARTICLE III.—Membership.

Section 1. Membership in this Association shall be of three classes: (a) active, (b) associate, (c) honorary. Only physicians who are actively engaged in the practise of industrial medicine and surgery, or who are engaged in the investigation of industrial medical problems, shall be eligible to active membership; other physicians shall be eligible to associate membership. Any person who has contributed distinguished service to the object for which the Association stands will be eligible to honorary membership. Proposals for honorary membership shall be handed to the Secretary-Treasurer in writing, and must be recommended to the Association by the Board of Directors before they can be elected.

Section 2. Associate and honorary members shall have all the privileges of active members except the privilege of holding office and of voting for officers and directors and for amendments to the constitution and by-laws.

Section 3. Applications for active or associate membership must be made in writing to the Secretary, and must be approved by two active members in good standing before election can take place; a two-third vote of all the members present at any executive session of the Association shall be required to elect to membership. Applications shall not be acted upon by the Association unless they have first been approved by a membership committee of three selected by the Board of Directors. Honorary members may be proposed to the Association by the Board of Directors; a two-thirds vote shall be required to elect.

Section 4. The annual dues of active and associate members shall be three dollars per year, and shall be payable in advance on the first day of May of each year. Honorary members shall pay no dues.

Section 5. Any members whose dues are unpaid are not in good standing and shall have no vote until his indebtedness is discharged. When the dues of any member become two years in arrears, his membership shall automatically cease.

Section 6. Members may be expelled for cause; provided, that a copy of the charges made against him shall be furnished to him in writing at least one week prior to the meeting at which such action is taken. A majority vote shall rule.

ARTICLE IV.—Officers.

Section 1. The officers of this Association shall be a President, a Vice-President, and a Secretary-Treasurer. They shall be elected by the Association and shall serve from the close of the annual meeting at which they are elected until the close of the next annual meeting, and until their successors are elected and installed.

Section 2. The President shall preside at all meetings of the Association and of the Board of Directors and shall perform such other duties as may be directed by the Board of Directors. In the absence of the President, the Vice-President shall act in his place.

Section 3. The Secretary-Treasurer shall keep an accurate record of the transactions of all meetings of the Association and of the Board of Directors; shall carry on the correspondence of the Association; shall keep an accurate list of members; shall receive all moneys belonging to the Association, giving his receipt therefore, and shall pay all just bills against the Association, subject to the approval of the Board of Directors; he shall submit his accounts for audit at the annual meeting, and shall transmit to his successor in office all the funds and properties of the Association remaining in his possession. He shall submit an annual report to the Association in such form as may be determined by the Board of Directors.

ARTICLE V.—Administration.

Section 1. The officers of the Association shall be administered by a Board of Directors consisting of the officers and three additional directors. The Association at its meeting in Kalamazoo shall elect three directors, one to serve three years, one to serve two years and one to serve one year—and thereafter to elect each year one director to serve a term of three years. Their term of service shall begin at the end of the Annual meeting at which they are elected.

Section 2. The planning of the work of the Association, arrangements for meetings and programs, and for other matters pertaining to the administration of its affairs, shall be vested in the Board of Directors, except as otherwise herein expressly provided. The President of the Association shall serve as Chairman of the Board. The Board shall make its own rules and shall appoint such committees for carrying out the work as it shall deem necessary and advisable.

Section 3. The Board of Directors shall have power to fill vacancies among the officers and directors to serve until the next annual meeting of the Association, or until their successors are chosen and installed.

Three directors shall constitute a quorum.

Section 4. All resolutions shall be referred to the appropriate committees for recommendation before reference to the general body.

ARTICLE VI.—Meetings.

Section 1. The annual meeting of the Association shall be held at the place of and during

the week of the meeting of the Michigan State Medical Society, but the meeting shall be held at such hours as not to conflict with the sessions of the Michigan State Medical Society.

Twenty members shall constitute a quorum.

Section 2. Other meetings may be called by the Board of Directors.

Section 3. Notice of all meetings shall be sent to the members by the Secretary at least thirty days in advance of the date set for them.

Section 4. Each member of the Board of Directors shall be notified in writing by the Secretary-Treasurer at least two weeks in advance, as to time, place and purpose of meeting of the Board of Directors.

ARTICLE VII.—Election of Officers.

Section 1. Nominations for officers and directors shall be made by a Nominating Committee of three active members to be appointed by the President at the first executive session of any annual meeting. Provided, this article shall not be construed to deprive any member of his right to make nominations.

Section 2. Election of officers shall take place at the last executive session of the annual meeting.

Section 3. In the event of there being competitive nominations for any office, election shall be by ballot, and a majority of all votes cast shall be required to elect. If after two ballots there shall be no election, all but the two candidates receiving the highest number of votes shall be dropped from the ballot and the voting confined to the two so designated.

ARTICLE VIII.—Amendments.

This constitution and by-laws may be amended by a two-thirds vote of the members present and voting at any annual meeting of the Association; provided, that the call for such meeting shall have specified the particular amendment which is to be acted upon, which has not been specified.

The following officers of the association were elected.

President—Dr. H. N. Torrey, Detroit, Mich.

Vice-President—Dr. Guy Kiefer, Detroit.

Secretary-Treasurer—Dr. Dan H. Eaton, Kalamazoo.

Members of the Board of Directors:

Dr. F. C. Warnshuis, Grand Rapids, Mich. for three years.

Dr. T. F. Heavenrich, Port Huron, Mich., for two years.

Dr. R. C. Stone, Battle Creek, Mich., for one year.

A motion was made and carried that the Society apply for membership to the American Association of Industrial Physicians and Surgeons.

Dr. H. E. Mock of Chicago, President of the American Association of Industrial Physicians and Surgeons gave an instructive and inspiring talk on the future of Industrial Medicine and Surgery.

Dr. V. C. Vaughan, Sr. of Ann Arbor spoke upon the relation of Industrial and State Medicine.

Meeting adjourned.

Dan H. Eaton, Secretary.

DELEGATES RESPONDING TO ROLL CALL.

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July

ENCEPHALITIS LETHARGICA—REPORT OF A CASE.

G. F. BAUCH, M.D.,
 G. M. BYINGTON, M.D.,
 LANSING, MICH.

Reports of encephalitis lethargica are appearing with more and more frequency in medical literature. This is undoubtedly due to the fact that physicians are beginning to recognize it as a clinical entity. It is not unlikely that up to recently, this disease has been diagnosed erroneously as a typical poliomyelitis, botulism, encephalitis and intestinal toxemia.

The cause of encephalitis lethargica is at present unknown. Morse and Crump (a) have recently isolated from six cases, a staphylococcus-like organism. This organism when injected subdurally into rabbits produced a fatal lethargic state in these animals. This would suggest that we are dealing with an organism as the probable causative agent of the disease. On the other hand, Loewe and Strauss (b) and their coworkers report a series of studies which

tend to show that a filtrable virus is the underlying cause.

Whatever the cause of lethargic encephalitis, its outstanding feature is, the difficulty to differentiate it from other toxemias, particularly those of intestinal origin. Indeed, the case reported below was first suggestive of a typhoid or paratyphoid infection. However, the chain of symptoms which soon presented themselves, rendered the case in our opinion, unquestionably that of encephalitis lethargica.

REPORT OF CASE.

Patient 18 years of age; past history negative. No serious illness during childhood. During past winter patient has had cold continuously accompanied by considerable nasal discharge. This discharge during the month before the patient's sickness, contained blood at times and was irritating to the skin about the nose and upper lip.

Family history of no importance.

Patient became ill on April 28th, complaining of pain in right arm, leg and also right side of neck posteriorly, not very severe in character. First seen by one of us on May first. On this date, the patient was restless and unable to sleep, although pain did not seem to be the cause of these symptoms. There was no vomiting and no evidence of lethargy. At times she would become delirious, getting out of bed, wander about the house, and talk erratically.

Examination showed the patient well developed for her age and appeared to have had good health in the past. Mentally she was active, quick in answering questions and did so intelligently. Pupils were normal, reacting to light and distance, temperature 102, pulse 108. No opisthotonos, no headache, all reflexes normal except possibly some increase in the patella, no ankle clonus, no Babinski. Lungs and heart normal, abdomen scaphoid in shape and a marked gurgle in right iliac region, genito-urinary organs normal. Stools gave very bad odor.

Patient was again seen on May third and May fifth. Her temperature and pulse were practically the same each day—101.6 and 110, respectively, with no noticeable change in other symptoms.

On May sixth the patient had developed a state of lethargy. Although she could be aroused very easily and answer questions intelligently, she would immediately lapse back into state of sleep. The patient appeared to be very toxic, lips dry and cracked, hectic flush, eyes closed, evidently a double ptosis; temperature 100.6, pulse 110, respiration normal and lungs clear; abdomen unchanged, and reflexes as described. No paralysis, patellar reflex very slightly increased; ankle clonus and Babinski negative.

Condition of patient remained unchanged until May 9th.

Upon this date (May 9th) at noon the temperature was 101.6 and pulse 120; aroused from lethargy with difficulty, but would answer simple question intelligently, but much slower.

All other symptoms remained unchanged. From this time (noon) the temperature rose **each hour** until May 10th, reaching 104.8 axilla, soon after which she died.

Laboratory Examinations:

May 3rd—Urine negative except for slight trace of blood due to menses.

May 5th—Negative Widal.

May 5th—Wassermann negative with alcoholic extract antigen and doubtful with Cholesterinized antigen.

May 6th—Widal doubtful positive.

May 6th—Stood negative for typhoid.

May 6th—Blood count,

Large monocleers	----	4%
Small	-----	32%
Transitional	-----	4%
Neutrophil	-----	59%
Poly Basophil	-----	00%
Eosinphil	-----	1%

Autopsy was refused.

DISCUSSION OF CASE.

It is evident from the above that the case was without doubt encephalitis lethargica. We have here five distinct features which in agreement with other authors (c) point to this diagnosis.

(1) Prolonged cold as a forerunner to this disease.

(2) Delirium and restlessness followed by lethargy.

(3) Marked ptosis in both eyes.

(4) Patient when aroused from lethargy gave intelligent answers to questions.

(5) Comparatively low temperature and insignificant changes in temperature throughout the course of the disease until shortly before death, when the temperature became unusually high.

REFERENCES.

- (a) (Journal of Laboratory and Clinical Medicine, Vol. 5, P. 275, 1920).
- (b) (Journal of A.M.A., Vol. 74, P. 1373, 1920).
- (c) (Rhein: N. Y. Med. Journal CXI, P. 758, 1920).

Editorials

55th ANNUAL MEETING.

Once more do we record the transactions of an annual meeting and turn another page in

our organizational history. For those who were in attendance we need add but little by way of comment. It is to those who were not present that we desire to call attention to certain parts of the official proceedings that are published in this issue.

The address of Dr. Fred'k R. Green, Secretary of the Council on Public Health Education of the A. M. A., on The Physician's Attitude Towards Compulsory Health Insurance was a most excellent one. We do not believe that there exists a better brief upon the subject. It summarizes the whole problem in an admirably clear manner. We were indeed fortunate in securing Dr. Green who so ably discussed this important subject.

The session devoted to Compulsory Health Insurance afforded an opportunity for our members to secure a clear understanding of the subject. The papers of Drs. Chapman and Apfelbach and the papers and discussion by Ochsner and the remarks of Mr. Lapp are published in this issue.

We were honored by the presence of Dr. Hubert Work of Pueblo, Colo., President-Elect of the American Medical Association, who addressed the members at the first general session. We count ourselves fortunate in being able to have present this leader in our medical world and of having had the privilege to present him to our members. The tribute he paid to Dr. Vaughan was enthusiastically received.

Words will never describe the scene enacted during the presentation of the Memorial Tablet for the four of our members who made the Supreme Sacrifice during the world's war. During the presentation and acceptance of the tablet the entire audience stood at attention in respect and memory of those departed brothers. It was a most solemn and dignified occasion.

The House of Delegates was prompt in its deliberations and expedited the work that was placed before it. The providing for a State Survey, the Revision of our Constitution and By-Laws, creation of a new scientific section on Public Health, the provision made for Regional Clinics were the more important legislative enactments. Dr. H. E. Randall of Flint was elected as Councilor to succeed Dr. Bird, re-

signed. The re-election of our Delegates to the A. M. A. was accomplished in accordance with the recognition that had been given them and because delegates familiar with the formalities of our parent organization are more capable and efficient representatives.

President Baker's annual address was a timely discussion of the profession's progress. Our members are invited to read the entire address as published in this issue.

The profession of Kalamazoo were ideal hosts and ever alert to the welfare and comforts of those present. The dinner was a delightful social affair. We are all appreciative of their efforts and kindnesses.

The attendance of 558 members was a goodly representation. However, more might have stretched a point and been present. No one could attend the scientific section meetings and not profit thereby. Nothing but commendation was heard for the section programmes. The section officers certainly deserve congratulations for the efforts expended in providing such attractive programmes.

COMPULSORY HEALTH INSURANCE.

We refer our members to the official minutes in this issue for full details.

This issue contains the several papers that were read and the discussions that ensued at our Kalamazoo meeting when this subject was considered. In addition the reader will find an exhaustive report of our Committee on Civic and Industrial Relations. We also publish the resolutions passed by the House of Delegates and at the General Session.

We are of the opinion that our readers have at their disposal sufficient data to enable them to realize the scope of Compulsory Health Insurance agitation and projects. We feel that they should be fairly familiar with the nature and purposes of this proposed plan. We also are certain that no one can advance an excuse for being ignorant of the subject.

Our committee has splendidly acquitted itself of the duties imposed upon it and has earned every member's gratitude and thanks. Its work is not yet finished and we shall continue to look to them for future developments.

We urge our members to carefully read these articles and be governed by the information imparted. We also invite a further discussion and expression of opinions for publication. We must not permit our interest to lag.

MEMBERSHIP DRIVE.

The House of Delegates directed, that a Membership Drive be conducted during the month of October. The purpose being to obtain as members every eligible physician in the State.

County Societies are requested to appoint a "Drive Committee." This Committee will list all the non-members who are eligible in their county and assign a certain number of names to each member.

Members who receive names of fellow physicians who are not members are expected to call upon these men; tell them why they should become members; the benefits of membership and secure their applications. The Drive Committee will supply you with blank applications.

Why a Membership Drive:

1. Our State Society should include and be representative of all the eligible physicians in Michigan.

2. Organized effort, influence and prestige alone will serve to conserve our individual interests in these days of changing relationship in the social and industrial world.

3. Legislative measures affecting our relationship to the public and our personal prerequisites will be introduced into the Legislature this coming Session. Our committee, protecting your interests, will exercise greater influence and accomplish desired results if they can exhibit their requests as coming from the entire profession of Michigan.

4. Larger County Societies, composed of all the eligible physicians in the county, will accomplish greater results in their respective localities.

Every Member a Worker: It is desired that every member become an active worker to make this Drive a success. Start now to line up your men and secure your applications early. Watch for the Honor Roll.

Editorial Comments

We had a splendid Commercial Exhibition at Kalamazoo. However, it has always seemed to us that a scientific exhibition should also be prepared. In order to secure one for our 1921 meeting at Bay City we are calling for volunteers who will assume the responsibility of arranging for such an exhibition. The Council will lend its support to such a committee. Who among our members will volunteer to undertake the work?

Industrial fee schedules may be satisfactory and desirable. Good fees for industrial professional work is not an unreasonable demand. We have never found a corporation that was unwilling to pay good fees provided the work done matched up to those fees. The difficulty and dispute arises when a good fee is charged but the work done, the results obtained are unsatisfactory and might have been otherwise had there been exercised modern skill and ability. You cannot expect the full fee for a fracture that you failed to reduce and keep in reduction when with skill and care it would have been possible to do so. We might continue to recite numerous similar conditions. The point we wish to make is that the company or corporation has a liability and must pay that liability in dollars. The amount of liability depends upon the end result and ultimate efficiency of the injured person. If that end result is a permanent disability that might have been prevented by modern and skilled attention and that class of service was not rendered the employer does not feel he should pay the same fee for that class of service when he is entitled to the greatest skill that that fee represents. To obtain the highest fees there must have been rendered the highest type of professional service.

A number of our County Societies were not represented at our annual meeting because their elected delegates did not attend. Our organization is a representative one and its activities are the wishes of its members as expressed by the enactments of our House of Delegates. If your state organization is not accomplishing that which you wish it to accomplish it is because your representatives did not attend the annual meeting and record your views and wishes.

WANTED: Superintendency of Hospital or Sanatorium; Partnership or Location for General Practice.

A Doctor, now Surgeon to large Corporation, seeks location in Lower Michigan. He has had

twenty-five years service as Industrial Surgeon with wide hospital experience. Is familiar with all phases of Institutional work. Especially strong in executive ability. Has achieved some reputation as Director of Social Service work and as writer along this line. Degrees of A.B. and M.D. Family of wife and adopted daughter aged seven.

Chief desire is to establish home among a congenial people. Would consider superintendency of hospital or of Sanatorium. Would consider a partnership with a young Doctor. Would take a village practice if location is within easy reach of a good town having a good hospital. Whatever or wherever the location or position the one requisite thing is good schools. Want to get located before school begins this fall. Can take position at any time as an assistant can take present work until Chief is appointed.

Address, Industrial Surgeon, Care Journal.

New Periodicals—Studies in Mental Inefficiency is a quarterly issued by the Central Association for the Care of the Mentally Defective of London, England. It is under the editorial supervision of Drs. Shuttleworth and Tredgold. The Mental Hygiene Bulletin is the new official publication of the Canadian Committee for Mental Hygiene. It is in the nature of an information bulletin, setting forth data relative to that efficient organization. The California Institution Quarterly is published by the Whittier State School under the editorship of K. M. Cowdery, assistant superintendent. It is the official organ of the California State School Conference which meets four times a year.

The Michigan Hospital Association elected the following officers in Detroit, June 9, 1920:

President—Dr. C. G. Parnall, of Ann Arbor.

Vice-President—Dr. Stewart Hamilton, of Detroit.

Vice-President—Miss Grace McElderry, of Muskegon.

Vice-President—Miss Anna Schill, of Flint.

Secretary—Durand W. Springer, of Ann Arbor.

Treasurer—Dr. Herman Ostrander, of Kalamazoo.

The next meeting of this body will be held in Grand Rapids on December 8 and 9, 1920. About 100 hospital officials and physicians attended the Detroit Conference.

The Colorado Congress of Ophthalmology and Oto-Laryngology will be held in Denver, July 23rd and 24th, 1920, and you are cordially

invited to attend and to contribute to our program. Should you find it possible to present a paper its title should be in the hands of the Secretary not later than July 10th, and with it the name of the one you wish to designate for the opening discussion.

This Congress, held under the auspices of the Colorado Ophthalmological and the Colorado Oto-Laryngological Societies, has become a permanent institution and this year promises to be even more successful than heretofore, if we may judge by the personnel of out of State men already on the program. Among those who have already signified their intention in this regard are several of more than national reputation and it is hoped to have contributions from others of similar standing.

This invitation is extended to all ethical practitioners of the specialties so that all interested in either branch of the work may feel themselves welcome.

The place of meeting will be the County Society Assembly Hall, Metropolitan Building, 16th and Court Place, Denver.

To encourage study of the means for the prevention and cure of tuberculosis, the Hennepin County Tuberculosis Association of Minneapolis, Minn., announces that it has set aside a fund for the support of a tuberculosis research fellowship in the Graduate School of the University of Minnesota. The candidate for the fellowship must be a graduate of a Class A medical college. He will be expected to devote himself to research in some problem concerned with the causes, prevention, or cure of tuberculosis. No teaching or other service will be required. The fellowship yields \$750 the first year and progressively increasing amounts to be appropriated for the second and third years as conditions warrant. Inquiries and requests for application blanks should be addressed to the Dean of the Graduate College, University of Minnesota, Minneapolis, Minn.

Plans are announced for the expenditure of about \$10,000,000 for the establishment of a medical teaching center at the Walter Reed General Hospital in Washington, D. C. The plans include the purchase of sufficient land to permit the removal of the Army Medical School to a position in close proximity to the Walter Reed Hospital. Eventually it is planned that the Surgeon General's Library and Museum will also be made a part of the teaching plant. Besides services in medicine, surgery and clinical special-

ties, there have been planned psychiatric and roentgen-ray services.

The following was recently received:

Detroit, Mich., May 29th.

Dear Sir I am new comer in the City trying to find you office I was at the City Hall today and learn that I could find you all at this no. If so would you all Please Give me prices of Doctor Lincincen you city as I wont stop Here for 6 or 8 months I will Come Down and Patches one

You

The first number of the "Annals of Medicine" appeared the latter part of May, 1920. It is published quarterly under the direction of the Councilors of the American Congress on Internal Medicine and the American College of Physicians. Doctor Frank Smithies of Chicago is the supervising editor. This number contains besides a number of interesting papers and abstracts of current literature the complete roster of the American College of Physicians and one of the American Congress on Internal Medicine.

Grace Hospital, Detroit, has just issued its 1919 annual report. During the year 24,350 patients were treated in all departments; 7,820 in the hospital proper and 1331 in the Miriam Branch. With such large clinical material the staff certainly is presented with abundant opportunity for conducting scientific investigation and research. The Journal invites the report of such work for publication.

Elsewhere in this issue will be found the announcement of a drive for membership during the month of October. The House of Delegates has directed that a statewide campaign shall be conducted by our County Societies during the month of October, to secure the affiliation as members of every eligible physician in Michigan. It is desired to cause our organization to be representative of and include in its membership every reputable physician in Michigan. This is possible if every County Society will assume its part during the drive. The plans developed will be successful if co-operation is subscribed. Will you interest yourself in your county and help put this across?

The plan for Regional Clinical Meetings will be developed by a committee appointed by President Mc Lean and the Council. Just as soon as the faculty and schedule is arranged full announcement will be made and assignment of dates will be allotted. We are very optimistic

over this plan and believe it will be very profitable to the members.

We are purposely limiting our Editorials in this issue because of the space consumed in publishing the minutes of our annual meeting. We feel that every reader should take the time to read these minutes, the President's address, and the discussion of the subject of Compulsory Health Insurance. It is our opinion that this issue is one of the most important that we have published. It should be preserved for future reference.

The newly elected section officers and the President's Committee appointments will also be found in the front form of advertising pages.

Are you familiar with the part you are to take in our October Membership Drive? If not ask your County Secretary. It devolves upon each member to make this Drive successful. Start now.

Correspondence

May 28, 1920.

To the Members of the Michigan State Medical Society:

Your kind telegram sent to me from Kalamazoo, I can assure you is appreciated. You have always been so kind and considerate to me, that I am sure it is far beyond my worth. I want to thank one and all for the same.

Yours very truly,
J. H. Carstens.

June 3, 1920.

Dr. Frederick C. Warnshuis, Secretary,
Grand Rapids, Mich.

My Dear Doctor:
The very appropriate memorial tablet arrived promptly and has been put in place on the wall near the front door of the Medical Building. There was no expense involved in placing it. There were plenty of willing hands glad to do it. I wish to express my high appreciation of the thoughtful provision for this tablet. Mrs. Vaughan has seen it and appreciates it highly. If I had the addresses of the relatives of the other names on the tablet I would inform them of its presence here. Possibly you have already done so.

With the deepest thanks for your consideration in this matter, I am
Yours truly,
V. C. Vaughan.

Deaths

Doctor E. P. Partlow of Constantine, Michigan, died June 2nd at his cottage at Klinger Lake from a stroke of apoplexy.

Doctor Partlow was 58 years old and had practiced in Constantine for the past twenty-four years, having located there in 1896.

Surviving are the widow, two brothers, and one sister.

State News Notes

For Sale, house with office attached, barn and garage. Value \$5,000. No better country and small village practice anywhere in the State, ten grade school, electric lights, two churches, etc., in village of Orleans, Ionia County. Reason for selling, moving out of State. Price \$3,000, half down, balance mortgage at 6%. Write Journal for further particulars.

The Commencement exercises of the Detroit College of Medicine and Surgery were held in the Auditorium of the Detroit Board of Commerce, June 18, 1920. Admiral Robert Kennedy, U. S. N. gave the principal address. Doctor John S. Hall, President of the Detroit Board of Education, presented the diplomas. Forty-one received their degree of Doctor of Medicine at this time.

A number of the Detroit physicians are taking advantage of the season and are seen on the various golf club links in and around Detroit, Doctors Frank Kelly at the Country Club, J. Walter Vaughan at Lochmore Club, Dale King and Ray Connor at Meadowbrook Country Club, R. E. Jamieson at Bloomfield Club, Hedley Williamson, H. R. Varney, F. C. Robbins, T. B. Cooley, C. D. Brooks, D. A. MacLachlan and G. L. Connor at the Detroit Golf Club.

As noted elsewhere in this issue, the Michigan Association of Industrial Physicians and Surgeons was organized. It is earnestly requested that all who are interested in the work, join this association by sending their names to Dr. Dan H. Eaton, Secretary, Kalamazoo, or Dr.

H. N. Torrey, President, David Whitney Bldg., Detroit.

On June 15th, Doctor and Mrs. Morley entertained the Detroit Academy of Medicine at their home "Red Lane Farm," Oakland County, Michigan. During the afternoon Doctor Morley gave a very interesting talk on "Nostrum Advertising." Later the Fellows were dinner guests of Doctor and Mrs. Morley.

Through the generosity of Mr. and Mrs. Edward Lowe, Butterworth Hospital of Grand Rapids has received a gift of \$700,000 toward the erection of a new hospital building.

Doctor Ray Connor has been recently appointed Attending Ophthalmologist Providence Hospital, Detroit.

Dr. F. C. Warnshuis was elected Chief of Staff of Butterworth Hospital, Grand Rapids, at the annual June meeting of the Staff.

Mrs. C. B. Stockwell, wife of Dr. C. B. Stockwell of Port Huron, died on June 2nd following a stroke of apoplexy. The Journal extends its sympathy to the Doctor who is one of our ex-vice-presidents and an old faithful member.

Dr. Geo. K. Pratt, formerly of Oak Grove Hospital, announces the opening of offices in Flint with practice limited to Neurology and Psychiatry.

Dr. Henry S. Bartholomew of Lansing announces his return from military service and resuming a practice which will be limited to Dermatology, Syphilology including Roentgen-therapy.

Dr. C. T. Southworth has so far improved from his prolonged illness that he has gone to the seashore to fully recuperate. His absence at our Kalamazoo meeting was the third one in thirty-three years.

The Bulletin of the American College of Surgeons (Jan., 1920) contains the reports of the 1919 survey of General Hospitals of 100 or more beds in United States and Canada.

Certain Detroit physicians have bought the Boulevard Sanitarium and have renamed it the Lincoln Hospital. They took possession June 5, 1920. Extensive changes will be made.

Dr. R. L. Clark, 207 W. Forest Ave., Detroit, will appreciate the finder's returning of his bill

book which he lost at Kalamazoo during the Annual Meeting.

Dr. Ralph Allen, formerly of New York and recently discharged from Military Service, has located in Grand Rapids and is associated with Drs. Warnshuis and Portmann.

Doctors Harold Wilson, B. R. Shurley and Ray Connor attended the meeting of the American Laryngological, Rhinological and Otological Society in Boston, June 2, 3, 4, 1920.

At the Ann Arbor examination 92 and at the Detroit examination 53 took the final examination before the Michigan State Board of Registration in Medicine.

Doctor George LeFevre spent the month of June motoring through the East. He visited his daughter at Wellesley College and his son at University of Pennsylvania.

The Thirty-First Annual Clinic of the Alumni Association of the Detroit College of Medicine and Surgery was held in Detroit, June 14-18, 1920.

Doctor I. D. Loree, for several years associate professor of genito-urinary surgery, has resigned from the medical faculty of the U. of M.

The library of the late Doctor Enos Church has been added to the medical library of the University of Michigan.

Doctor and Mrs. A. D. Holmes and family are spending the month of July at the sea shore and the month of August in the mountains.

Mrs. B. D. Harison and daughter have opened their summer cottage at the Soo. Doctor Harison will join them in August.

Dr. Norman St. G. Vaun has located in Grand Rapids, with practice limited to Urology and Dermatology.

Charlevoix's New City Hospital was opened May 5, with Dr. R. A. Armstrong as Chief of Staff. Forty beds are thus provided.

Miss M. L. Elliott has succeeded Miss A. A. Guppy as Assistant Secretary of the Michigan State Board of Registration in Medicine.

Doctor and Mrs. Dale King will spend their vacation at their Camp in Canada.

Doctor Robert Beattie is spending the months of July and August in England and France.

Doctor Guy L. Kiefer will spend the month of August at his summer home at Mackinaw.

Doctor and Mrs. Tibbals have opened their cottage at Hickory Island.

Dr. Eugene Miller of Battle Creek has gone to California for a protracted vacation.

COUNTY SOCIETY NEWS

It is the Editor's desire to have this department of the Journal contain the report of every meeting that is held by a Local Society. Secretaries are urged to send in these reports promptly

ALPENA COUNTY.

The regular meeting of the Alpena Medical Society was held at the Eagles Hall, Alpena, Mich., May 20, 1920. Drs. Jackson, Purdy, Schmaller, Lister and Mc Kinnon were the hosts to a brook trout dinner, to which the Society had as their guests ten local and state anti-tuberculosis workers. After a splendid dinner Dr. J. D. Dunlop acted as chairman of the program committee. He introduced Drs. Vanderslice, Rhodes and Pierce of the State Anti-tuberculosis committee, all of whom responded with interesting and valuable papers.

Following the social session the regular meeting of the society was held.

C. M. Williams.

The Alpena County Medical Society will hold its semi-annual clinic and banquet in Alpena Thursday, June 17.

9 A. M. Diagnostic Clinic and Clinical lecture at Fletcher Building "Goiter." Physicians are invited to co-operate in having fifty cases of interesting goiter cases to present to Dr. Hugh Cabot, Prof. of Surgery of the University of Michigan, to form the basis of his clinical lecture. Patients must be present at 9 A. M. The lecture will start at 10 A. M.

12 Noon. Dinner at Racetts at Long Lake in honor of Dr. Cabot. Each member is limited to one guest each. Ladies will be present. Tickets \$1.50 each.

2:30 P. M. at Fletcher Building, Presentation of a case by each member to Dr. Cabot for surgical diagnosis. These cases should be accompanied by a written history, and should be such as not to require special instruments for examination.

All clinics will be free to patients and will be diagnostic only.

Autos will leave the Fletcher Building at twelve for the dinner. Please have your car

there so that out of town guests may be accommodated.

C. M. Williams, Secretary.

DICKINSON-IRON COUNTY.

The regular monthly meeting of the Dickinson-Iron County Medical Society was held at the home of Dr. Wm. Hausheer, in Florence. Although the attendance was not large, the meeting was an extremely interesting one. In the absence of Dr. Anderson, the president, Dr. Wm. Stevens presided over the meeting.

Dr. C. F. Larson of Crystal Falls read a very interesting paper on "Backache," a subject which was both unusual and instructive.

The Society was fortunate to have as its guest Dr. A. M. Hume, of Owosso, former president of the State Medical Society. Dr. Hume kindly consented to discuss the paper read and also gave us an interesting talk on the work now being done by the Board of Medical Registration.

Following the regular meeting a most appetizing dinner was prepared by Dr. Hausheer to which all did full justice and all voted the doctor a royal entertainer.

The next regular meeting will be held in Iron Mountain on June 7 at the Country Club at which time Dr. Anderson will deliver a paper. This will be a joint meeting of the doctors and dentists of the two counties. Also Dr. Boyce will present a paper.

MEMBERS—our meetings are growing more and more interesting. Don't miss any of them from now on.

L. E. Bovik, M.D., Secretary.

GENESEE COUNTY

The Genesee County Medical Society met on Wednesday, May 12th, President Randall presiding. Dr. E. L. Eggleston of Battle Creek spoke on "The Selection of Proper Therapeutic Measures in Lesions of Upper Right Quadrant." He reported many interesting case histories and illustrated his talk by lantern slides.

The meeting on May 19th was entirely devoted to the subject of "Compulsory Health Insurance." Dr. W. H. Winchester gave an able historical review of the subject and gave an abstract of the various bills introduced to date. While the Society went on record as opposing Health Insurance as so far proposed, it was felt that we should have something constructive to offer in meeting the criticism of the public. Dr. Manwaring believed that the organization of Community Hospitals, partly supported by the State, would improve the quality of our service. This could only be brought about after a campaign of education. A resolution was passed suggesting that the Michigan State Medical Society employ a full time Director of Public Health Education and that the Society raise its dues enough to cover the cost of such an addition to its organization.

At the meeting on Wednesday, June 9th, Dr. R. Taylor of the Department of Pediatrics, University of Minnesota, gave a practical talk on "Infant Feeding." Of particular interest was the success of his plan to secure 100 per cent. maternal nursing. Failure to nurse was most commonly due to incomplete emptying of the breast. If the profession at large realized the simplicity of the plan advocated, it would do much to lower infant mortality. Dr. H. W. Plaggemeyer of Detroit spoke on "Disease of the Prostate." He reviewed modern advances in diagnosis and treatment in a practical and scholarly way.

W. H. Marshall, Secretary.

GRAND TRAVERSE-LEELANAU COUNTY

On the evening of May 18, 1920, the Grand Traverse-Leelanau County Medical Society held a meeting at the Traverse City State Hospital, as the guests of Dr. J. D. Munson. Some important matters of business were considered, after which Dr. Munson read a very interesting paper on "Vagotonia—A Review" and demonstrated certain interesting reflexes.

H. V. Hendricks, Secretary.

Book Reviews

DIABETIC MANUAL: For Mutual Use of Doctor and Patient: Elliott P. Joslin, M.D., Asst. Professor of Medicine, Harvard. 2d Edition. Cloth. Lea & Febiger, Philadelphia. Price \$1.75.

The successful treatment of diabetes entails co-operative assistance on the part of the patient. The vast majority of diabetics have a most meager information as to their infection. To secure co-operation without understanding the whys and wherefores is impossible. To enlighten

a patient requires more time and effort than it is possible for a busy physician to give.

This volume contains the information that every diabetic should have to obtain intelligent successful treatment. Therefore it is the most valuable remedy for the physician. No man should undertake to treat a diabetic until he has caused the patient to secure this text. That done your treatment at once becomes triply effective, more scientific and the end result will witness a wonderful lowering of mortality and prolongation of life.

By all means do we urge our readers to secure this manual, study it, and prescribe it for every diabetic under your care. It is a most valuable aid.

Miscellany

WHAT CAN BE DONE FOR THE MALARIAL PATIENT?

Anne T. Bingham, M.D.

Additional suggestions along definite practical, preventive lines have gradually accumulated during study of the individual patients and are as follows: (1) need for early detection and wise handling of such hampering tendencies as fear, suspicion, discontent, seclusiveness, lack of self-control, dependence (on people, on the opinions of others, etc.), morbid or unproductive day-dreaming, a tendency to the dispersion of energy and interest, inferiority feeling, depression, and secretiveness; (2) need for rapport between children and parents and teachers; (3) need for simple, straightforward, but biologically sound sex instruction to children and adolescents; (4) need for employment of physicians with psychiatric training in connection with schools, vocational departments, employment bureaus and other social agencies which necessarily deal with problem cases; (5) need for intelligent vocational advice based on thorough individual study, since work as a source of satisfaction is too little appreciated; this applies equally to those who have never realized their possibilities and to those who struggle with work which is beyond them; (6) need for meeting adequately and individually the loneliness problem which plays such a role in city life.

The final idea which we would stress is that, instead of accepting the fact that a person is difficult, an intelligent effort should be made to get at the causes, to seek to understand instead of condemning, and to employ such remedial measures as seem best adapted to the individual case.

*Mental Hygiene, April, 1920.



The Rational Treatment of Constipation

AN eminent authority has said: "Cascara Sagrada ought never to be used as a purge, but only as a laxative." In a nutshell, that is the rationale of Cascara therapy.

Cascara Sagrada extracts should be given in gradually ascending doses daily, preferably at night. In obstinate cases two or even three daily doses may be required. The treatment should be persistently continued until the patient has a normal bowel action every day. Then and not until then should the dose be tapered off to the vanishing point.

Cascara Sagrada acts as a tonic to the intestine, thus preventing a recurrence of the torpid state that follows the use of purgatives generally.

Fluid Extract of Cascara Sagrada (P. D. & Co.) is the most active and efficient of all cascara products. It is made from carefully selected and cured bark, botanically identified as the true *Rhamnus Purshiana*. As a tonic laxative it has been prescribed with marked success for more than forty years.

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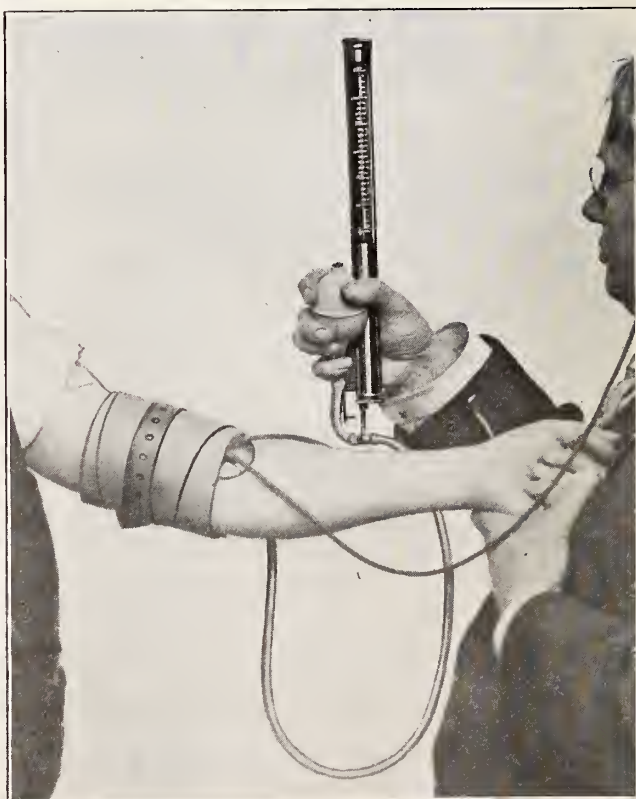
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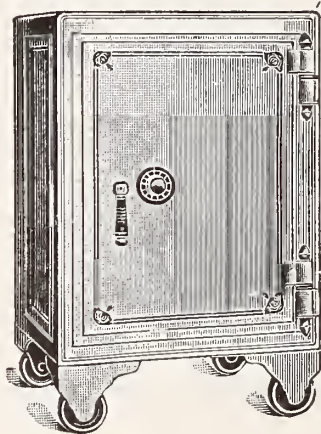
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	1913		1914		1915		1916		1917		TOTAL	
	Numb. Cases	Fatal	Numb. Cases	Fatal	Numb. Cases	Fatal	Numb. Cases	Fatal	Numb. Cases	Fatal	Numb.	Fatal
Arizona-----	1	---	---	---	---	---	---	---	---	---	1	---
California-----	1	---	---	---	---	---	1	---	---	---	2	---
Colorado-----	---	---	---	---	---	---	---	---	1	1	1	1
Florida-----	---	---	1	1	---	---	---	---	---	---	1	1
Georgia-----	---	---	---	---	1	1	---	---	---	---	1	1
Idaho-----	---	---	1	1	---	---	---	---	---	---	1	1
Illinois-----	2	1	4	1	6	2	9	3	7	2	28	9
Indiana-----	---	---	8	2	2	---	1	---	---	---	11	2
Iowa-----	---	---	7	1	4	1	3	---	3	1	17	3
Kansas-----	---	---	---	---	---	---	---	---	4	1	4	1
Kentucky-----	---	---	2	1	---	---	---	---	---	---	2	1
Massachusetts-----	---	---	---	---	2	1	---	---	---	---	2	1
Michigan-----	6	2	3	2	2	1	1	---	---	---	12	5
Minnesota-----	2	2	5	---	---	---	10	6	2	1	19	9
Missouri-----	---	---	---	---	1	1	2	1	---	---	3	2
Montana-----	---	---	---	---	---	---	1	1	---	---	1	1
Nebraska-----	---	---	2	---	1	---	3	1	1	---	7	1
New Jersey-----	---	---	2	---	---	---	---	---	1	---	3	---
New York-----	---	---	2	---	1	---	---	---	---	---	3	---
North Carolina-----	---	---	1	---	---	---	---	---	---	---	1	---
North Dakota-----	2	1	2	---	---	---	2	2	2	---	8	3
Ohio-----	2	---	3	---	1	---	---	---	---	---	6	---
Oklahoma-----	1	1	---	---	1	---	---	---	---	---	2	1
Oregon-----	1	---	---	---	---	---	---	---	---	---	1	---
Pennsylvania-----	1	1	3	1	2	---	4	---	1	---	11	2
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South Dakota-----	---	---	---	---	---	---	1	---	1	1	2	1
Vermont-----	---	---	---	---	---	---	1	---	---	---	1	---
Washington-----	1	---	---	---	---	---	---	---	---	---	1	---
Wisconsin-----	1	---	---	---	2	1	2	1	---	---	5	2
Canada-----	---	---	1	1	---	---	---	---	1	1	2	2
	21	8	47	11	26	8	41	15	25	8	160	50

RECAPITULATION.

	1913	1914	1915	1916	1917	Total
Fatal-----	8	11	8	15	8	50
Recovery Doubtful---	---	6	4	3	3	16
Recovery Probable---	12	31	14	23	14	94
	20	48	26	41	25	160

Ninety per cent of all cases occurred during July, August, September and October.

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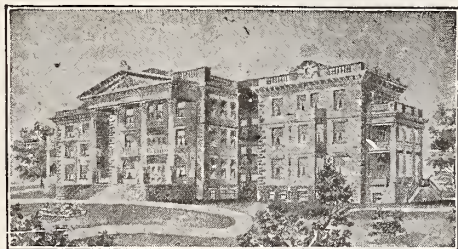
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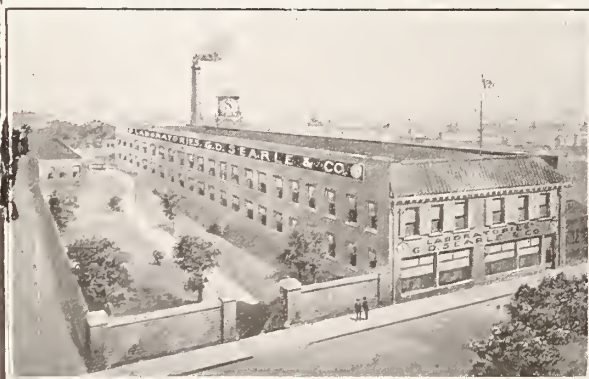
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Vol. XIX

GRAND RAPIDS, MICHIGAN, AUGUST, 1920

No. 8

Original Articles

THE IMMEDIATE OPPORTUNITIES OPEN TO THE MEDICAL PROFESSION.*

ELMER L. EGGLESTON, M.D.
BATTLE CREEK, MICH.

The achievements of the medical profession during the past decade have been such as to excite a feeling of pardonable pride in the heart of every individual member. The part played by our profession during the recent war paved the way, in a great measure, for victory on the side of the allies. Comparing the mortality record with that of recent wars, we find, notwithstanding the improved perfection of the implements of warfare, that the loss of life was less than in former conflicts, solely as a result of the scientific care the wounded received, and because the mortality from disease was very much lowered. The organization of the medical department of our army was probably accomplished with greater perfection than most of the other departments—thanks to the executive ability of the medical officers—and we owe a debt of gratitude to the men who at great sacrifice, gladly offered their all that the cause of liberty might triumph.

The past decade has witnessed decided changes in the practice of medicine. The perfection of laboratory procedure has markedly advanced our knowledge and has become indispensable as an aid to the clinician. The development of instruments of precision has been of great aid in arriving at a scientific diagnosis in cases heretofore not understood. New methods for the determination of disordered function in certain of the glands of internal secretion have been of inestimable value in the treatment of conditions previously treated in a more or less empiric or symptomatic way. The study of basal metabolism, which has thrown so much light on disorders of the thyroid func-

tion, allows us to be very optimistic in believing that disturbances in the function of other glands of internal secretion may soon be equally well understood. Instead of our viewpoint being determined by the pathologist, whose whole concern was with structural derangement, we now are concerned with the functional ability of the diseased organ or group of organs. The former conception tended to therapeutic nihilism; the latter has brought forth new enthusiasm and an optimism that has been greatly to the advantage of the sick and afflicted. So in all lines of medical endeavor, we find advancement being made which promises that medicine will soon be reckoned among the sciences rather than among the arts.

On the other hand, is the profession in times of peace so organized as to best serve the interests of humanity and in the final analysis, its own interests? In times of war a selection has to be made in order to supply certain positions with men whose training fits them to properly serve in the desired capacity. Where such men could be found, the government provided proper training. This tended toward the development of specialists. On the return of these men to private life, they have been loath to enter again the broad field of general medicine, feeling that to become efficient along special lines was much more desirable than to attempt to deal with more diversified problems for which they were improperly prepared. This has resulted in the perfecting of organizations which include a number of men whose post-graduate training has been along different lines. It is felt that by such an arrangement physicians are in a vastly better position to render efficient service to their clientele; such service as might be offered in a first class hospital with a highly organized staff of clinicians working, each in his own particular field, laboratory workers and roentgenologists included.

This in nowise is meant as a criticism of the general practitioner, as there are few men who deserve greater credit than he. But the times demand that he must have at hand and utilize, not only modern laboratory procedure but also

*Chairman's Address, Medical Section, Annual Meeting M.S.M.S., Kalamazoo, May, 1920.

the knowledge of those specially trained along specific lines, if he is to give proper consideration to the best interests of his patients. The problem of efficient service to the inhabitants of small towns and rural communities is one that particularly confronts the profession today. Four or five doctors in a small town all working along similar lines, certainly fail to accomplish either scientifically or financially, as much as might be accomplished if they would mutually agree to support one another in special lines of work. There is but little doubt that our former methods are, in many ways obsolete, and it behooves us to give the matter most careful consideration. To attempt to outline a scheme that might be worthy of your consideration, would vastly exceed the limits of this paper. I only wish to remind you that this problem demands solution at your hands in the immediate future.

With the close of the war, it was anticipated that social conditions would again be as they were before the great conflict. This hope has unfortunately not been realized and we observe a state of such disorder and unrest as has never been known in this country. There seems to be no apparent way to improve the situation. The immediate future is so uncertain in its possibilities as to cause considerable apprehension in the minds of all. We are drifting on a sea of unrest without chart, compass or rudder, and the possibility of our cruise ending in disaster rather than in a safe arrival at the desired haven, cannot be ignored. It is certain that the ills of society are greatly in need of attention. The politician, judging from the results of his recent efforts, is helpless. Too frequently he is guided by purely selfish motives with the result that he has the confidence of but few. Our colleges appear to be without vision and our youths are too often inoculated with ideas that unfortunately fail to fit them for useful places in society. The clergy, alas, too often appear to be blinded by form and convention and are unable to appreciate the immediate needs of society which prevents their being in a position to be of assistance. Since the members of our profession, without doubt, come into closer relationship to the public than does even the clergy, it is not impossible that we are in a position to be of inestimable value in guiding the minds of our clientele into safer channels.

It has been said that the education received by the medical student unfits him for citizenship, his whole training being along the lines of the prevention and cure of disease. It is true that a considerable number of our profes-

sion become so engrossed in their professional duties that they have scant time for legitimate diversion, church or fraternal activities, and it is extremely rare to hear of a physician interesting himself in political matters. Considering the gravity of the social situation which confronts us, is it not time for us to awaken to our opportunities and responsibilities? We are confronted with a situation in which the individual in all classes of society appears to be wholly selfish. He is interested in acquiring as much as possible in every way that will minister to his own comfort and gratification. He has for the time forgotten that he is a member of society and that the well-being of the whole is necessary to his own continued well-being.

Must the members of this profession, who enjoy the greatest confidence of all classes of society be blind to their opportunities in this present crisis? Or will they have such vision as will permit them to make an accurate diagnosis of the disorders of the body politic, and to so prescribe and serve as to bring about a situation where the individual will be willing and anxious to make some sacrifice, personally, in order that society generally may profit. In so doing we may be able to perform a double service to society and to be of great assistance in ushering in a better order of social conditions.

INFECTIONS OF THE UPPER URINARY TRACT.*

DANIEL N. EISENDRATH, A.B., M.D.
CHICAGO, ILL.

This subject has become so complex that it seems advisable to confine the present paper to two features which I deem of special importance. These are: first, the part played by local conditions in favoring infection; and, second, the diagnosis and treatment of pyelitis.

LOCAL CONDITIONS WHICH FAVOR INFECTION.

Conditions which give rise to obstruction to the urinary stream in the bladder and urethra, are familiar to all, hence I will refer only to those in the ureter and kidney.

It is generally accepted that pathogenic organisms are constantly passing through the healthy kidney without giving rise to any damage. The presence, however, of any local condition which causes either intermittent or permanent slowing up of the urinary current will favor the localization of these organisms which are being constantly brought to the kidney and

*Read at the Annual Meeting of the Michigan State Medical Society at Kalamazoo, Mich., May 26, 1920.

ureter by their respective blood vessels. One of our first duties therefore in the examination of a case of infection of the upper urinary tract, is to institute a most careful search for the possible existence of such a contributory cause.

The precision of our present diagnostic methods in urology has enabled us to detect a large number of such local conditions whose presence would not have been even suspected, had we not employed such methods as radiography, pyelography and special ureteral catheters as a more or less routine procedure.

The following is a convenient classification of some of the most common conditions in the kidney and ureter which favor the localization of pathogenic organisms.

Kidney.

1. Congenital conditions
 - (a) Anomalies in position—Dystopia—the kidney remains in its embryonic position.
 - (b) Anomalies in form—double, solitary, fused or horseshoe kidneys.
 - (c) Anomalies of the blood vessels—Obstruction of the ureter by an accessory blood vessel to the lower pole.
2. Acquired conditions
 - (a) The presence of calculi, either at the ureteropelvic junction, the pelvis proper, in one or more of the calyces or in the cortex. The calculi may be found in one or both kidneys.
 - (b) Abnormal mobility—through intermittent obstruction of the ureter.

Ureter.

1. Congenital conditions
 - (a) Anomalies of insertion of the ureter into the renal pelvis.
 - (b) Congenital strictures or twists of the ureter.
2. Acquired conditions
 - (a) Strictures of inflammatory origin at any level of the ureter.
 - (b) Calculi—either impacted or migrating.
 - (c) Tumors pressing upon the ureter or less frequently having their origin in the wall of the ureter.
 - (d) Inflammatory dilatation of the ureter secondary to a ureteropyelitis.
 - (e) Atony of the ureter from neurological causes.

Although this classification may not include every possible cause of interference with a free outflow of urine, at least the more important ones are indicated. It is our first duty, in my opinion, in any case of infection of the upper urinary tract to make a most thorough urologic study of the patient to ascertain

whether or not one or more of the above causes is present. It seems superfluous to state that an experienced examiner would eliminate causes of similar nature in the lower urinary tract (bladder and urethra) as a portion of his routine examination of the case.

We are just beginning to appreciate the part played by congenital anomalies involving either the kidney or ureter or both, in favoring infection. The same is true of any foreign body like a calculus or of a decrease in the lumen of the ureter as the result of a stricture or of a tumor. By the inflammatory dilatation is meant a condition to which Braasch has recently (1) directed attention. As the result of more or less diffuse infiltration of the walls either of the ureter or of the renal pelvis, permanent dilatation of the lumen occurs.

One can readily understand how such a condition originally due to infection can prolong the latter by slowing up the urinary current.

It is possible at the present time to recognize the existence of such a dilatation by ureterography or pyelography and to form an estimate of how vital a part it will play in the prognosis of a case of infection of the upper urinary tract.

Plaggemeyer (2) has recently made a valuable contribution to our knowledge of atonic dilatation of the bladder and secondarily of the upper urinary tract in shell fractures of the spine. He also called attention to similar conditions existing in tabes, syringomyelia and spinal cord diseases in general which interfere with the innervation of the bladder. Infection of the upper urinary tract is favored in these cases in the same manner as where a congenital or acquired cause exists.

Before closing this portion of the paper let me warn against the employment of such diagnostic methods as ureteral catheterization or pyelography in cases presenting symptoms of acute urinary infection. I have seen one fatal case follow ureteral catheterization where a calculus, which could not be detected by the X-ray, blocked the ureter. It is better judgment to wait until all of the acute symptoms have subsided for some weeks before beginning the thorough study of the case.

DIAGNOSIS AND TREATMENT OF PYELITIS.

In no subdivision of the subject of urinary infection has greater progress been made than in the diagnosis and treatment of pyelitis. This is true of both the acute and chronic forms of the disease. In no small measure is this advance due to the employment of such methods as cystoscopy, ureteral catheterization, bac-

teriologic examination of the urine obtained from each kidney, ureterography and pyelography. These permit of far more accurate diagnosis in affections of the urinary tract than in those of any other portion of the body. Although the clinical history and the results of our examination of the patient are by no means to be discarded, it has been found that a fairly large percentage of cases both in the acute and chronic phases show none of the usual localizing symptoms which point to the kidney as the source. This, by the way, is not only true of pyelitis but of most of the rest of the forms of renal infection. The diagnosis in many cases must be one of exclusion, hence our ability to make a direct examination of the upper urinary tract through the employment of the methods referred to above, enables us to make a correct diagnosis in many an obscure case.

From the pathological standpoint an infection of any individual portion of the upper urinary tract is relatively rare, therefore the tendency to speak of a ureteropyelonephritis. From a clinical standpoint, however, we have learned that the infection may predominate either primarily or secondarily. Of the greatest interest is the observation that in cases of long standing infection the wall of the ureter or of the renal pelvis becomes extremely infiltrated. In the case of the ureter such an infiltration may be either localized, resulting in a stricture, or it may become diffuse, the sequel of which is either a uniform narrowing of the lumen or a similar dilatation.

In the case of the renal pelvis, the tendency is rather towards dilatation as a result of the infiltration of the pelvic wall resulting in a hydronephrosis of inflammatory origin.

I mention these pathologic changes especially because it is possible to recognize them clinically. On the other hand the existence of such sequelae of infection plays an important part in our inability to secure satisfactory results from pelvic lavage and other methods of nonoperative treatment.

The most striking symptoms of a typical case of acute pyelitis are the following:

(a) Fever either of a continuous type or cycles, consisting of a severe chill followed by high fever and a sweat, occurring with extreme irregularity.

(b) Localized tenderness and rigidity over the kidney.

(c) Ureteral colics resembling in every respect the syndrome observed in ureteral calculi.

(d) Disturbances of micturition.

(e) Pyuria, less frequently hematuria.

Enlargement of the kidney is not a reliable sign unless we are dealing with an infected hydronephrosis.

In a typical case of chronic pyelitis there is a history of the recurrence of the symptoms of acute pyelitis from time to time, accompanied by bacteruria or pyuria.

We have recently learned that a most severe hematuria can be due to a form of infection of the renal pelvis known as pyelitis granulosa. The pelvic mucosa is covered by velvety granulation tissue which may bleed and cause a hematuria simulating in every respect that due to a tumor, or similar cause of bleeding from the kidney.

In some cases of chronic pyelitis there is more or less persistent evidence of fever or urosepsis with the occurrence of the acute exacerbations described under acute pyelitis. It is unnecessary to describe separately the pyelitis of pregnancy, of the puerperium, of infants and children or that occurring from any other cause since the clinical pictures differ but slightly.

Were all cases of pyelitis to show more or less typical symptoms our problems of diagnosis would be comparatively simple. Unfortunately, however, there exists a relatively large percentage of atypical cases without any localizing symptoms. In these we may have only persistent disturbances of micturition accompanied by bacteruria or pyuria and other evidences of sepsis. In the acute form, these cases without localizing symptoms are especially difficult to recognize. Hence it is a good rule to follow, to search for a possible focus in the urinary tract in every case of obscure sepsis without localizing signs.

The thorough urologic study of every case of renal infection with the limitations as to acute cases which I have mentioned above, cannot be too strongly urged upon every one who comes in contact with these patients.

The study of a large number of cases of renal tuberculosis has thrown considerable light upon the similarity in symptoms and some of the objective findings in the early stages of tuberculous and nontuberculous infections of the kidney. The necessity of differentiating between the two conditions by routine bacteriologic study of the urine in all cases of chronic pyelitis which do not respond to treatment cannot be too strongly emphasized. The cystoscopic appearances of the two varieties of renal infection closely resemble each other until miliary tubercles or ulcerations appear in the vicinity of the ureteral orifice of the affected side. If the sediment obtained from a case of chronic pyelitis which does not respond to treatment

be stained in a more or less routine manner for tubercle bacilli, I feel confident that many of the cases of renal tuberculosis would be recognized at an earlier stage than is at present the case.

During recent years we have learned that occasional cases of renal tuberculosis begin in such an acute manner with chills, fever, tenderness over the kidney, etc., as to completely simulate an ordinary nontuberculous infection. I have in mind three of my own cases in which the diagnosis was only made by staining the pus obtained in perinephritic abscess for both tubercle bacilli and ordinary pyogenic organisms. In two of the cases the staphylococcus aureus was associated with the tubercle bacilli, and in one with colon bacilli.

TREATMENT.

The treatment of acute pyelitis should be a conservative one unless one is forced by the persistence of the symptoms of urosepsis to intervene. By expectant treatment, I refer to the administration of large quantities of water and of moderate doses of such antiseptics as hexamethylamine. Personally I do not believe that there is any advantage to be gained in these cases by making the urine either alkaline or acid, or by the drinking of alkaline waters. If the symptoms persist beyond a reasonable period the mere insertion of a ureteral catheter for the purpose of drainage, will often suffice in producing a decided amelioration of the condition. In several cases of extremely severe puerperal pyelitis I have obtained marked success by a lavage of the renal pelvis.

It is superfluous to again refer to the necessity of making a thorough examination of the patient for any possible sources of obstruction in these acute cases which do not respond to expectant treatment. In the cases of chronic pyelitis the same precaution should be taken not to overlook the conditions mentioned in the first portion of this paper, which might favor the continuance of the infection of the renal pelvis.

A bacteriologic study of the sediment obtained in a case of chronic pyelitis is essential to success. I can only refer again to the frequency with which renal tuberculosis is overlooked in these cases. The dilatation of strictures and the removal of calculi and other sources of obstruction are indicated before more radical measures such as nephrectomy can be considered.

Many of the cases of renal infection will respond in a most gratifying manner to lavage. In my own practice I have employed nitrate of

silver with very satisfactory results. We begin with a 1-1000 solution, injecting 4 to 6 cc. into the renal pelvis and then increase gradually to a 2 per cent. solution. No case can be considered as cured until the patient is free from symptoms and the urine is bacteriologically sterile.

The results obtained by Hunner (3) by dilatation of strictures of the lower ureter in the female have taught us much about the conservative treatment of renal infections. I can warmly recommend the study of his articles to those interested in the subject.

In addition to a search for tubercle bacilli in all cases of chronic pyelitis which resist treatment, it is advisable to employ ureterography and pyelography to determine whether or not the condition referred to above as inflammatory dilatation or dilatation of the ureter and renal pelvis exists.

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DISCUSSION.

DR. REITH, Ann Arbor: I am very much interested in the pictures that Dr. Eisendrath put on the screen from the fact that I have just had a case of double kidney on the right side very similar to the one he has shown. The only dissimilarity was that the hypernephrosis in my case was above instead of below, as in Dr. Eisendrath's case.

I have seen three cases of so-called congenital cystic kidney that were down at the brim of the pelvis but infantile in form; in other words, they were kidneys that had never developed. There are occasionally kidneys found that are developed in this location; that have gone on to maturity. These kidneys are not symptomless and often the patient is operated on for appendicitis. In the last case I saw there was a very small kidney. I made a diagnosis for the general surgeon but he did not care to accept my diagnosis and the appendix was removed. The patient was allowed to go home with the infantile kidney and had just as much trouble after as before.

DR. W. J. CASSIDY, Detroit: To my mind the general surgeon should be able to do the things that the average general specialist will do along the line of genito-urinary surgery. I might say that a great number of patients consult me who were treated for cystitis. The patients are treated month after month not realizing that the condition is not in the bladder. As a rule the bladder disease is simply nothing more or less than the mouth organ of the infection. A number of these cases have been operated on and passed from surgeon to surgeon. Some of them had their tonsils removed; others have had the appendix removed; large numbers have had bladder irrigations. It goes to show that if we are going to make diagnoses, we have got to use the instruments of precision and the more you use them the more proficient you will become in diagnosis. Buy your instruments and use them. Not only that, if you examine your case carefully and are able to go over the different areas, you will find that you will detect a great many more things than if you have another man go over it. The great trouble in medicine and surgery is that we are split up into too many branches.

I think Dr. Eisendrath should be complimented on the way he handled the subject. He has given you good general diagnosis by a good general surgeon. He is able to take care of the cases as they come up and is able to take care of the complications and is able to get his patients well.

DR. DANIEL N. EISENDRATH, Chicago (closing): Dr. Cassidy has brought out two points that are to me of special interest and which time would not permit me to take up, namely cystitis. He mentioned that the general surgeon should make his own diagnosis. Up to the past few years I was obliged to have all my ureteral catheterizations and cystoscopies done by other men. It was so unsatisfactory that I simply went to work and took some lessons. I learned in six lessons. There is nothing that will give you so much satisfaction as doing this work yourself. You will be spared the disadvantage of having someone else do it. I would not trade that knowledge for anything else I could get. It is such a satisfaction to be able to see what is going on and not be obliged to turn your case over to the urologist.

As to the question of cystitis that Dr. Cassidy brought up, if there is anything I try to impress upon the men with whom I come in contact and I preach it morning, noon and night in relation to tuberculosis, it is this, that if you have a case of cystitis that does not respond to the washing out in your office or the things used in the treatment, the trouble is not in the bladder, it is higher up. It is only the smoke. The fire is higher up. You will never get rid of the smoke until you get rid of the fire.

LETHARGIC ENCEPHALITIS, SYMPTOMS AND PHYSICAL SIGNS.

WILLARD D. MAYER,
DETROIT, MICH.
HISTORICAL.

The first recorded instance of an epidemic of this disease is that of Tubingen, Germany, which occurred in 1712 and was characterized by somnolence with cranial nerve paralysis. Milder epidemics are said to have occurred in Germany in 1745, in Lyons in 1800 and in Milan in 1802. However, the second epidemic of real proportions occurred in 1890 and then the disease received a meaningless term, that of "nona." As in the present epidemic, the disease was first noted in Austria Hungary, Italy and Switzerland; however, it apparently did not become as wide spread as it was not observed in the United States at that time. (1)

The present epidemic appeared in Eastern Europe, Austria, in 1917 and apparently spread westward, reaching France and England early in 1918, and the United States in the fall of 1918. Economo named the disease "Lethargic Encephalitis," and his account is one of the first to describe the condition as a clinical entity. (2) The English writers studied the condition carefully and at first were inclined to believe that they were dealing with botulism, in fact the early opinion held in Austria was that the condition was a food poisoning. It

is indeed not surprising that this disease and botulism were confused as clinically a fulminant case of lethargic encephalitis and one of botulism indeed appear to be quite similar. We realize that the term lethargic encephalitis or as it has become known to the laity, "sleeping sickness," may not be a proper scientific name for this disease from the standpoint of the pathology involved or from its symptoms, yet the terms are fairly descriptive and their meaning realized, which after all is the important factor.

CLASSIFICATION OF CASES.

A study of the literature of lethargic encephalitis in articles which have appeared in the past two years reveals the extreme variance in the clinical picture which is presented by this disease. Various writers have described groups of cases, some being mild and others severe. Indeed, MacNalty, (3) the English observer in an article which appeared in 1918, mentioned six groups of cases as he observed them, and Kinier Wilson (4) mentions seven groups as: First, acute and fatal cases with mainly mesencephalic localization; second, mild recovering third, Ponto-medullary-superior and inferior type; fourth, severe types with prominent mental symptoms, five, severe and fatal types with meningeal symptoms; six, cortical types with lethargy, catatonia and mental symptoms; seven paralysis agitans type. More recently Bassoe who has indeed contributed excellent articles upon this disease mentions "the delirious and the meningo-radicular types." (5)

AGE AND SEX.

This disease is seen in both sexes and in the young and old. The youngest patient we observed was a boy aged four years and the oldest a man aged forty-one years.

SYMPTOMATOLOGY AND PHYSICAL SIGNS.

The symptomatology, physical signs as well as the clinical course of lethargic encephalitis may usually be divided into two distinct stages; namely, the stage of irritative phenomena, and the stage of somnolence or stupor, or in some cases of languor. The first stage, that of irritative phenomena occurs at the onset and may persist for a variable period, usually about two days or two weeks. Evidently the degree and severity of the infection as well as the brain area involved are the determining factors. The irritative stage as a rule merges gradually into the stage of somnolence, although in three of the cases seen, the onset of somnolence was abrupt. This was noted in two children and one adult. In several of the cases, usually

those which were fatal, irritative phenomena as evidenced by clonic muscular spasms, twitching of the extremities, headaches and arm pains persisted thruout the course of the disease. In the somnolent stage, occasionally evidence of further extension of the process was noted, as shown by the development of strabismus or facial paralysis. However, two fairly well defined stages, as had been mentioned, could be determined in all of the cases studied. In all of the cases, a history of a "cold" or mild grippal infection was obtained. In none of the cases was there a distinct history of a recent attack of severe influenza.

ONSET.

The onset in most cases, in adults was gradual. (6) while in children it was generally abrupt. (7), (8), Flexner, however, mentions the onset as being acute and states, "that the patient has been able often to tell the precise hour of a particular day on which he fell ill." (9) We have not had this experience with adult cases, however, at the onset there is nausea, vomiting, rhinitis, conjunctivitis, tinnitus, chilly sensations with slight temperature elevation and symptoms suggestive of an upper respiratory infection, followed by headache. In all cases seen, the headache was described as being mild at the onset and becoming progressively more severe, often so severe as to resist all of the usual coal tar remedies and morphine. One patient required hyoscine and morphine and only obtained relief following a lumbar puncture. The headaches were either frontal, occipital or both, and usually became generalized. The frontal pains were usually accompanied by local tenderness, so much so as to suggest the existence of frontal sinusitis. The occipital pains often radiated down the neck. Associated with one case was a severe hyperesthesia of the scalp which persisted thruout the entire course of the disease, only to be relieved following the outbreak of a fine discrete herpetic eruption.

Two of the patients complained of "shooting pains" in the upper extremities suggestive of a neuritis. One patient had pains in his right upper extremity continuously for six weeks. Four patients become irrational shortly after the onset.

Following the slight temperature elevation at the onset, a gradual increase was noted. In the severe cases, within five to ten days after the onset the temperature ranged from 102 degrees to 108 degrees. Certain mild cases were practically afebrile thruout the entire course of the illness. The temperature was constantly ele-

vated in the severe and like wise fatal cases, the range being 102 degrees to 106 degrees. This has been noted by Buzzard. (10) Before death the temperature rose to 107 degrees to 108 degrees. The pulse at the onset was slow and full but later became rapid and soft. The blood pressure was never elevated.

Following the onset, various phenomena of cerebral irritation were observed and will be considered. Visual disturbance was a constant factor in most cases; the vision was described as being hazy, visual acuity diminished, most adult patients had considered having their eyes refracted, and indeed several had done so. Strabismus was noted in six cases. Lateral nystagmus occurred in three cases. Facial paralysis was present in all of the severe cases and often was not present until after the onset of somnolence. Obstinate constipation was present at the onset, and continued thruout the entire course of the disease. Muscular twitching and tremors were present in most all cases and as a rule involved the extremities.

In one case clonic spasms of the muscles of the extremities, both upper and lower, the shoulder girdle, and abdominal wall occurred constantly and were so severe as to suggest paramyoclonus multiplexis. (11) This phenomenon has been mentioned by Reilly and Bassoe, (12) also Sicard and Kudelski (13) and Boyd (14).

Choreiform movements were noted in the young by Climenkek. We saw one such case. Usually during the stage of irritative phenomena there was no tendency to lethargy. In fact sleeplessness was often the most conspicuous complaint and the hardest symptom to combat. Hence lethargic encephalitis at this stage of the disease is surely a misnomer.

STAGE OF SOMNOLENCE.

Following the stage of irritative phenomena, somnolence or marked asthenia occurred. The mersion of the stage was usually gradual, however, in three cases was quite abrupt. The clinical picture as observed in the stage of somnolence was vastly different from that of the irritative stage. The severity of the disease also caused considerable variance in the comolent stage, milder cases were only soprose and could be easily aroused while the severe cases at times were aroused with great difficulty and at times not at all. However, the individual, who previously has lamented loudly about his headaches and arm pains, and was generally restless, now became quiet and slept both day and night, had to be aroused to take nourishment and would lapse into deep sleep

while being fed. As a rule there were no complaints and the patient was quite content to be allowed to sleep.

The facies become Parkinsonian, cheeks often flushed, pupils irregular, often unequal and at times widely dilated and reacting poorly to light, Strabismus became marked and nystagmoid movements were often constantly present. Ptosis of the eyelids occurred and five of the patients were absolutely unable to keep their eyelids elevated. Photophobia was present, but was not severe. Cerebration was delayed, the patients seemed stupid and answered questions poorly, obeyed commands indifferently, stopped speech in the middle of sentences evidently forgetting what they wished to say. Flexner explains the state of lethargy as being one of a mechanical nature in that sensory stimuli from the special and senses pass by way of the thalamus to the cerebral cortex (15) and as the thalamus is often involved by a cellular infiltration the impulses are interrupted in their passage to the cortex, thus lethargy occurs. He further states that the obstruction is not absolute as the patient can be aroused by increasing the intensity of the stimuli as in loud speaking. (16)

Most of the severe cases were irrational and several wildly delirious at times only to lapse into a state of stupor. In certain severe cases, deglutition became difficult and finally could not be carried out as choking followed. Protrusion of the tongue often could not be done and if attempted seemed to require considerable effort. Frequent catheterization was necessary in four cases. This is most important as tremendous distention of the bladder will occur, with danger of rupture. The cough reflex was often abolished and care was used in preventing fluids from trickling into the larynx.

PHYSICAL SIGNS DURING THE STAGE OF SOMNOLENCE.

The physical signs noted during the stage of somnolence were variable and much depended upon the severity of the case and the degree and site of cerebral involvement. The tenderness over the frontal regions usually disappeared. Fundus examination often disclosed blurring of the margins of the discs and at times increased fullness of the veins but there was practically no evidence of increased intracranial pressure. The tongue and mouth became foul and required constant attention. The drum membranes were in all cases found normal.

Rigidity of the neck was a rather constant finding, at times it was slight, while in several

cases was very marked. It was more evident earlier in the stage of somnolence. Kernig's sign, or possibly better stated as rigidity of the lower extremities was present either unilateral or bilateral in all severe cases. The Babinski, Oppenheim and Gordon signs were often present on one or both extremities.

The knee jerks were often exaggerated at the onset but later disappeared or were greatly diminished. Slight or rather spurious ankle clonus was present in two cases. A rather constant finding in several cases, was the response on the part of individual muscles to tapping with the percussion hammer. Catatonia was present frequently in both mild and severe cases. Hemiplegia and hemianopsia have been observed by Buzzard. (17), (18). We have recently seen one patient with an apparent left hemiplegia. Wilson mentions the occurrence of hallucinations and delusions. We saw one case with evident hallucinations.

DURATION OF THE DISEASE.

The duration varied considerably, apparently the severity of the infection was the controlling factor, as one fulminating case died within ten days while the other fatal cases continued for as long as two months. The duration of illness in recovered cases varied from three weeks to two months. We have considered recovery as regards hospital discharge. However, in following up our cases we have learned of diminished visual acuity and general body weakness persisting for as long as three months. That complete restitution to normal takes place cannot be definitely stated; defects in connection with the eye accommodation have been known to persist for some time. (19), (20) Heiman mentions to occurrence of imbecility in two children who had this disease. (7)

RECURRENCE OF THE DISEASE.

In one case we noted the possibility of a recurrence. The patient was discharged from the hospital in excellent condition. He was no longer somnolent and the pupils which had been unequal were now equal and reacted well to light. He still had occasional headaches. However, ten days after discharge, he again became somnolent, the right pupil larger than the left. This persisted about three days and then the patient improved.

DIAGNOSIS.

This is based upon history of the onset with headaches, fever, vomiting, visual disturbances, facial paralysis and other irritative phenomena, which in turn are followed by somnolence. Lab-

oratory findings are important in the exclusion of other conditions which give rise to a similar picture.

LABORATORY FINDINGS.

The most important role played by laboratory findings lay in the exclusion of various other conditions which must be differentiated from lethargic encephalitis. The student of this disease will be struck by the negative laboratory reports received in such a grave illness. In fact, the preponderance of these negative reports, which, if positive, might serve to tend towards a different diagnosis, increase the likelihood of the diagnosis of lethargic encephalitis.

The blood counts showed normal number of red cells with no changes in morphology, the HgB was normal, the white count varied from 11,000 to 25,000, and the polymorphonuclear count varied from 61 to 84 per cent., the remainder generally consisted of lymphocytes with an occasional eosinophile. The higher total counts with higher poly counts, usually were in those cases with high fever or a hypostatic pneumonia.

Blood cultures were made in eight cases and were all negative. Blood Wassermans were made in eight cases and were negative. The blood nitrogen varied from 40 to 60 mgm per 100 cc. blood. It was slightly higher in the prolonged and severe cases, possibly due to dehydration and retention of waste products. Widal's were made and were negative.

The spinal fluid finding varied. However, the fluid was always clear, occasionally there was a slight increase in pressure, the cell counts varied from 6 cells to 140 cells. It has seemed that some of the more severe cases had higher cell counts. The cells were lymphocytes as a rule, and there was no great increase in polymorphonuclears. There was slight increase of globulin in some of the cases studied. The fluids were all sterile, and were cultured repeatedly and examined for T. B. C. with negative results. The Wasserman test of the spinal fluids were all negative with the exception of one case in which a XXX positive report was received. However, an autopsy revealed findings typical of lethargic encephalitis.

The urine was frequently examined and amounts voided in twenty-four hours determined when possible. Aside from an occasional finding of acetone we found nothing abnormal.

X-rays of the skull were made on six cases with negative reports. X-ray was attempted in all hospital cases, but certain cases were so restless that good pictures could not be obtained in several instances.

DIFFERENTIAL DIAGNOSIS.

Other conditions which must be excluded in the diagnosis of lethargic encephalitis are: cerebro-spinal lues, poliomyelitis, various meningitides, meningismus, brain abscess and tumor, sinusitis, botulism, uremia, diabetic coma, pneumonia with delirium. While it is not our purpose to enter into a complete discussion as to the differential diagnosis of this condition yet we desire to quote from the excellent article by Boyd as to existing differences between lethargic encephalitis and poliomyelitis.

"1. Epidemics of poliomyelitis occur with remarkable constancy in the summer time; the outbreaks of lethargic encephalitis have occurred during the winter months.

2. Poliomyelitis is a disease, par excellence, of children; encephalitis is much more common among adults than children.

3. The onset of paralysis in poliomyelitis is typically sudden, the effects are lasting and there is usually muscular atrophy; in encephalitis the palsies often come on gradually, are characteristically fleeting, and there is no muscular atrophy.

4. If the two diseases are due to the same cause, it is strange that in the present epidemic no cases of spinal poliomyelitis should have occurred.

5. The virus of poliomyelitis is readily transmitted to monkeys; whereas no cases of satisfactory and undoubted transference have been reported in encephalitis.

6. Although many cases of poliomyelitis may show lethargy, even coma, yet with the onset of respiratory difficulty, as Peabody has pointed out, the mental state becomes clear, and the child seems to awaken to the struggle that lies before it. Nothing like this is seen in lethargic encephalitis.

7. Although the virus of poliomyelitis is introduced intracerebrally in monkeys, the lesions produced are always spinal, never cerebral.

8. Leucocytosis, sometimes as high as 30,000 is met with in poliomyelitis. It is usually normal or only slightly raised in encephalitis.

9. A lymphocytosis, sometimes marked, in the cerebrospinal fluid is the rule in the early stages of poliomyelitis; the count is normal or only slightly increased in encephalitis except in exceptional cases."

Careful examination plus laboratory findings will serve to render the diagnosis clear in most cases.

PROGNOSIS.

In the milder cases those in which the patient can always be aroused, will respond to questions, will take nourishment, the prognosis has been uniformly good. However, when deglutition has been difficult or impossible or the patient could not be aroused, the results have been uniformly fatal. Constant temperature elevation 103 to 105 degrees has been a reliable index to a fatal outcome. (16) The cause of death was usually respiratory failure and often associated with it was hypostatic pneumonia and pulmonary edema. Of sixteen cases of all degrees of severity there has been eight deaths a mortality of 50 per cent. The mortality as estimated by various observers is 20 to 50 per cent.

TREATMENT.

Entirely Symptomatic.

The mild cases apparently required but little treatment, an occasional analgesic for headache, catharsis and a short period of confinement to bed were sufficient. The severe cases during the irritative stage often required all of the usual coal tar preparations, with even morphine and hyposcine to combat the headaches and arm pains.

Warm packs were used to quiet restless patients. Free catharsis was given, fluids and nourishment were forced. Urotrophin was given for possible effect on the spinal fluid.

Somnolent Stage:

Sedatives were no longer necessary. Nourishment, especially fluids were forced and if the patient was unable to swallow, gavage was performed using eggs, milk with whisky, and lactose. Nutritive enemata were given. Fluids were introduced by the Murphy drip method, by hypodermoclysis and intravenously. This is important, as these patients are greatly dehydrated.

Daily enemata were given, catheterization performed when indicated. Temperature sponges were used for hyperpyrexia. Oral hygiene was given considerable attention. Digitalis, caffeine, and atrophine and other stimulants were used when indicated.

Special methods of treatment used, consisted in repeated lumbar punctures. This was done in two cases with no improvement. Washing the spinal canal with saline was done in one case without improvement. Lumbar puncture and withdrawal of 15 cc. of spinal fluid and subsequent introduction of blood serum obtained from the blood of a recovered case was performed once with no improvement.

Blood transfusion using healthy donors was

done twice on one patient as a supportive measure. Temporary improvement was noted but the patient subsequently died of respiratory failure.

Intravenous or intramuscular injection of blood from recovered cases was considered but owing to the difficulty in obtaining sufficient blood this could not be done.

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SOME POINTS IN THE RADIOGRAPHIC EXAMINATION OF THE CHEST WITH PARTICULAR REFERENCE TO THE LUNGS.

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A working knowledge of physical diagnosis as applied to the chest is most difficult to impart to others, as well as to acquire. It is safe to say that many physicians never become so efficient in the art of percussion and auscultation that their findings reveal the pathology actually present within the thorax. The writer in all humility, lays no claim to superiority in the art of diagnosis of chest conditions as usually taught. Probably the inability of many to acquire satisfactorily the art of diagnosis by

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percussion and auscultation is due in a large measure to the average student's meagre knowledge of the physics of sound production and sound transmission, through which knowledge only, the result of percussion and auscultation can be intelligently interpreted. A prominent internist at the head of the Medical Department of one of the most noted medical schools in this country lays no claim to proficiency in the art of percussion and auscultation. What must be the attitude of us of humbler aspirations? The writer, however, does not wish to be understood as advocating any one method to the exclusion of others. All methods of physical examination, and the clinical laboratory, too, should be utilized in arriving at a diagnostic judgment; on the other hand, no examination, even though made by the specialist in diseases of the chest, is complete without a radiograph examination.

With the discovery of the X-rays, physical diagnostic methods have received their greatest contribution. Inspection was extended so as to include the structures within the thoracic grill. The X-rays extend the vision as the stethoscope extended the sense of hearing. Perhaps no other single diagnostic factor has done so much in the way of revealing actual chest conditions pathologic or physiologic as complete radiographic examination. The percussion method reveals the density of the structures directly beneath the percussion finger. The X-rays also give us an idea of density but with greater detail.

The supracardiac area of the chest does not lend itself well to percussion especially in obese persons. A comparatively large number of pathologic conditions may be found in the upper mediastinum, for instance, substernal thyroid, enlarged thymus, mediastinal tumor and enlarged mediastinal glands. In addition to these we have the pathologic changes met with at times in the great vessels. The value of X-ray findings in these conditions is beyond dispute. This method has afforded a new approach to the subject, as well as a new point of view. The X-rays have changed our ideas on visceral anatomy in general. Radiographic studies have taught us to look for the anatomic variant rather than the anatomic constant.

It is not the purpose of this paper to deal exhaustively with the radiographic examination of the chest, but to discuss from X-ray view point some of the commoner pathologic conditions, which confront the physician in the routine of general practice.

PLEURISY.

During the spring and winter, and perhaps to a greater extent since the influenza epidemic, we have had to deal with pleurisies accompanied by serous and purulent exudates; and here the X-rays are practically one hundred per cent. efficient as diagnostic aids. Fluoroscopic examinations of the chest reveal at once the presence, location and extent of such effusions; radiographic examination demonstrates more readily and with greater exactness and detail such physical conditions than is possible by any other method. A pleuritic effusion undrained does not produce a fluid level; the space occupied by it being irregular. If the parietal pleura be the first involved, the lung appears compressed towards the mediastinum. The position of the effusion in the thorax is little effected whether the patient occupy the standing position or be fluoroscoped or plated in the prone or supine position. If the exudate be sufficiently extensive the heart and mediastinal vessels are crowded to the side of the thorax opposite the effusion. An effusion, which shows a line of fluid level, if not partially drained by thoracentesis, has spontaneously drained through a bronchus. This condition is known as hydro or pyopneumothorax. Often an exploratory puncture has failed to reveal the presence of fluid where it was actually present. The non-exudative form of pleurisy is best diagnosed by means of the X-rays. The fluoroscope gives us a kinetic or moving picture of the lung showing whether or not it is retarded in its respiratory movement. The width of the intercostal spaces on one side of the chest as compared with the corresponding intercostal spaces on the other, seen fluoroscopically shows us whether compensatory movement be present. The condition of the costo and cardio phrenic sinuses on deep inspiration and the extent of excursion of the diaphragm reveal more clearly than the stethoscope the presence of friction rubs or adhesions between parietal and visceral pleura. Pleurisies may be interlobar or mediastinal, or in fact, any part of the pleural surface may be the site of the disease. Pleurisies are usually secondary infections. Exposure to cold and trauma of the chest wall are probably the only two conditions that produce primary pleurisies. Tuberculosis is by far the most frequent exciting cause.

Lung abscesses and empyemas are made out with comparative ease by X-ray examination. These may likewise occupy almost any position. They are sometimes drained spontaneously by rupturing into a bronchus and being expector-

ated. The radiographic is the surest method of ascertaining their presence and location.

HEART.

The position and size of the heart bear a close relation to pulmonary affections. The so-called "cor pendulum" or small centrally located heart is pathognomonic of tuberculosis. So much importance does Barjon attach to this syndrome that he says that a normal heart in a tuberculous person, especially if the disease be not far advanced, should warrant a favorable prognosis. The small atrophic heart sometimes called the "drop heart" points to a low grade resistance on the part of the patient. This type of heart is easily made out from observation of the heart silhouette, especially with the patient before the vertical fluoroscope where as much of the right auricle appears to the right of the mediastinal shadow as of the left ventricle to the left side. A convenient way for more accurate measurement, and particularly for suspected hypertrophied heart, is that described by Danzer¹ of Brooklyn, who recommends a comparatively simple method of ascertaining the size of the heart by means of the X-rays. The percussion method when it comes to ascertaining the size of the heart is difficult and unreliable and the possibility of error is great. The most accurate method, of course, is the orthodiagraph, which consists of the X-ray plate taken at a distance of six feet from the patient, from which distance the rays are practically parallel. The heart bears an almost constant relation to the framework of the chest. The ratio between the heart and chest is quite constant, according to this writer, except when pathological processes are present. The onset of valvular disease will cause an enlargement without corresponding increase in the size of the chest. Enlargement of the heart will show itself in cardiothoracic ratio obtained by dividing the transverse right and left diameter of the heart by that of the thorax taken at a given diameter, usually at the level of the apex or one space lower, measuring to the inner border of the ribs. The cardiac measurement is taken at the widest points in the fifth space on the left and the fourth on the right. The patient should be in the upright position and his respiration should at the time of exposure be shallow and he should be instructed to stop breathing in midinspiration for the exposure. The normal heart is usually less than one-half the cross diameter of the thorax. The average is about 45 per cent. . Where the heart sil-

houette is over 50 per cent. it is regarded as suspicious and over 53 per cent. is considered definitely pathologic.

Brehmer contends that the small heart with two large lungs is an immediate element in the predisposition of tuberculosis. When the cardiothoracic ratio is under 45 per cent. it points to tuberculosis in the presence of suspicious lung findings.

The pneumonias yield themselves fairly readily to radiographic diagnosis though the shadow of a pneumonic lobe is seldom seen to be so dense as that of an effusion. From the very nature of the case this method is limited to hospitals where patients may be handled with the least discomfort or risk to themselves. Consolidation of any lobe or portion there of shows up readily in contrast with its pneumatic surroundings. Usually these grosser lesions can be determined satisfactorily on flat plates if well made.

TUBERCULOSIS.

Probably the radiographic method is used to determine the presence and extent of tuberculosis more than any other lung condition. In this case stereoscopic plates are almost imperative. The chest lends itself admirably to stereoscopic radiography, perhaps more than any other portion of the body since we have a symmetrical combination of lung and bony lattice, of contrast of light and shadow. The pneumatic cells of the lung permit the shadows of calcareous deposits and fibrosed lines to show in fine relief especially in stereoscopic plates where we can view the lung fields in three dimensions.

In making plates of the chest, the exposure to the rays should be the shortest possible consistent with the proper density and contrast.

The roentgenographic examination of the chest for tuberculosis is first fluoroscopic and secondly radiographic. The fluoroscopic study gives us a kinetic or cinematograph picture by which we are able to ascertain or eliminate the presence of adhesions or to recognize the lagging respiratory movement of the affected lung, or to study the heart, its size, position and action during deep respiration and forced expiration, also the movements of the diaphragm, the behavior of the apices of the lungs on deep inspiration accompanied by coughing. We may study the chest in this way from the dorsothoracic position and the reverse, also in the oblique position. The study of a pair of properly made stereoscopic plates reveals the finer detail of the lungs, including the mediastinal shadows, the apices, the fibrosed mottling and its re-

1. (The Cardio Thoracic Ratio, an index of Cardio Enlargement, See S. Danzer, Brooklyn, American Journal of Medical Sciences, Vol. 157 page 153.)

lation to the lobes of the lungs, the heart and mediastinal vessels.

The radiographic signs of tuberculosis in the early stages are more or less indirect. Of all diagnostic methods that which is absolutely positive is the bacteriological when the germs can be actually demonstrated in the sputum. A negative bacteriological finding however does not rule out the presence of tuberculosis. The hilus is the first portion of the lung to be involved by the disease. This is doubtless due to the fact that the primary infection which is usually during childhood, is in the hilus. Subsequent recrudescence periods accentuate the primary focus and carry the infection into the lung fields, upwards towards the apices and toward the periphery. A diagnosis is not made from the calcareous spots often seen at the hilus of the lungs. These represent old or latent lesions. The tubercular signs above the clavicle show the disease moderately advanced.

With the patient on the table or standing facing the fluoroscopic screen or the x-ray plate we eliminate the rather large shadows of the scapulae. We obtain a view of the lungs from the apices to the bases, which are in contact with the diaphragm. We outline the heart, study it in systole and diastole and study the position of the mediastinal shadow, which is made up of the aorta and the pulmonary arteries as well as vertebral column and sternum. We see the so-called hilus shadows standing out parallel to the mediastinum-like chain of islands parallel to a coast line. The hilus shadows are made up of vascular branches, namely the pulmonary arteries and veins. These shadows are increased or made more dense by the presence of hypertrophied and inflamed glands. Bronchial and peribronchial sclerosis add to the opacity of the hilus. By means of plate or fluorescent screen we study the costophrenic and cardiophrenic sinuses on deep inspiration. An excursion of the diaphragm less than five centimeters is considered abnormal. The disappearance of either of the sinuses or angles at the base of the lungs, indicates the presence of a pathologic process, either pleural or pericardial.

An examination of the lung involves an examination of the apices. The apices of the lung are less distinct than the lower lobes, due to the fact that they are smaller in extent than the lobes proper and are surrounded by the muscular and adipose tissue that constitutes the soft parts of the shoulder. In studying the apices we look for possible difference in density between the two. The lung fields should be studied in detail with an eye to the interlobar divisions.

Lastly in regard to cavities. Cavities in the lung are the result of softening and necrosis. Their size depends upon the extent of infiltration of affected tissue, the condition of the circulation in the immediate vicinity of the cavity, the patient's resistance, and the size of the bronchus leading to the cavity, or to the amount of bronchial dilation. Cavities vary in size from a centimeter in diameter to in rare cases that involving the whole lung. According to Honeij², those less than a centimeter in diameter may heal over and cease to exist as cavities. Those greater than a centimeter in diameter seldom heal and then only when the surrounding tissue is nourished by a normal circulation. From a radiographic view point, cavities especially when near the surface of the chest are sometimes difficult to recognize owing to pleural thickening, which accompanies a large percentage of cases of tuberculosis.

Aimard writes of silent cavities, which he described as being sometimes as large as a hen's egg, which are seen by means of the X-ray though they never respond to ordinary physical diagnostic methods. His researches have led him to conclude that the left lung is affected more frequently than the right and that where cavities were found, the left apex was always affected and the left base rarely. From a radiographic view point not all cavities can be demonstrated. A cavity at the hilus, for instance, and those overshadowed by the heart are practically impossible to detect. Those in the lung fields and in the apices are more easily detected owing to their position, the transparency of the area of cavitation being greater than the transparency of the surrounding lung.

SUMMARY.

Owing to the difficulty in acquiring a correct knowledge of chest pathology by ordinary methods of physical examination, every chest examination when possible should include a fluoroscopic and radiographic examination.

The X-rays are of particular value in arriving at the pathology of the supra cardiac area of the thorax.

In the diagnosis of pleurisy, empyemas and other conditions which produce marked changes in density, the radiographic findings approximate 100 per cent. in value.

In arriving at the size and position of the heart, the radiographic method is almost that of an exact science.

In tuberculosis, the X-ray method ranks among our best diagnostic aids and as a means

2. Cavity formation and annular pleural shadows and pulmonary tuberculosis by James A. Honeij. Archives of Internal Medicine, January 15, 1920.

of giving the exact condition of the lung past as well as present, its value is very important.

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DISCUSSION.

DR. ALDEN H. WILLIAMS, Grand Rapids: I think the day of controversy has passed in regard to whether we shall put up one form of physical examination against another. The doctor's idea in reading this paper, in all probability, is to urge upon the general practitioner to use another form to help all the others.

I would like to add also a few words along this same line. I think that in my own personal experience I agree with the doctor in that it is very difficult to be sure of the sound you hear. He made the statement in his opening few paragraphs that one ought to be familiar with the physics of sound in order to be an expert in picking out rales and the different sounds and their meaning. I heartily agree with this because it seems to me that more depends upon a perhaps inherited ability of memory of sounds, such as we notice in musicians. Of course, I would not say a person should be a graduate of a school of music to be expert in the use of the stethoscope. I do think all of us who have spent many hours and had many anxious moments with the stethoscope will agree that it is very hard now and then to determine the meaning of sounds.

I think that this can be noticed very nicely in a class in foreign languages. The teacher might give you the French word for house, and whether the teacher said "maison" or "maiso" or what not, it would be hard for many people in the different parts of the room to decide.

So I am an advocate of adding not only to the expert ear the data that can be attained by the expert eye, but I think it would be fine if every radiologist could have a preliminary training in pathology, as Dr. Hickey has and as many of the students have now who have graduated from the colleges. His practice with the microscope in the fine detail of the cells is a wonderful path for him to traverse on his way to decide what these lineal markings and fine fan shadows mean in the roentgen picture. Then too, he must be a careful chemist in order to get plates sufficiently good to warrant a lot of careful study.

If the general practitioner will not expect the X-ray man to deliver a diagnosis, I am sure the X-ray man will be very grateful. His only idea is to deliver his findings and to pray that these findings will add something to the case. I would not like to deliver a diagnosis without the symptoms and the clinical findings because if I did try to do this, I would fear that I had misinterpreted the shadows.

DR. A. W. CRANE, Kalamazoo: The scope of the discussion laid bare by Dr. Dempster is such as to discourage one from undertaking a discussion of it.

A question is as fresh as a daisy until it is settled. Certainly the X-ray demonstration of tuberculosis remains as fresh as any daisy in the field.

The doctor has taken up the subject of the heart as well as the lungs and everything affected in the chest. As you know, the general practitioner has come to read X-ray plates as well as the X-ray operator and has shown a very extraordinary interest in X-ray subjects.

When we undertake to draw a diagnosis concerning lung infections from an X-ray plate, we must remember that everything has been reduced to terms of density. Whether or not all the physical signs in the chest in tuberculosis can be so reduced is a question to be considered. To go into the various minutiae of the signs of tuberculosis would take altogether too much time to make it possible now.

We might say, however, that the problem which the X-ray operator has solved is not the problem of showing the presence of tuberculosis in the lungs. We may say, from radiological data, that there are something like ninety per cent of cases showing radiological evidence of tuberculosis in the lungs. It is not a question of showing the presence of tuberculosis, but it is a question of showing whether or not there is active tuberculosis present, and whether or not an old lesion has become again active.

There are certain X-ray signs which we can recognize. Some of them are very delicate or difficult to

recognize and need good plates; and that brings in the question of technique. We will say the subject is not yet in Class 1. Now, the X-ray plate in the X-ray examination by the fluoroscope may be conducted with the greatest skill; we may get a perfect plate and yet we may not see the activity.

I have recently had an experience of a patient who had a continued temperature, who had increased rapidity of pulse and no hyperthyroidism to account for it, bloody expectoration, and whose sputum showed a large number of tubercle bacilli. The physical examination of the chest was evidently negative. Yet there was no question but what this patient had an active tuberculosis. The symptoms had only been present for a few weeks. The X-ray examination of the lungs is absolutely negative. There were the deposits we find in at least ninety-nine per cent of the cases. The X-ray did not show them and the physical examination did not show them.

We certainly must be very careful. The X-ray examination if properly made and interpreted is bound to show an active tuberculosis or signs of activity. And the speaker has already brought out the point that the general examination should be made and conclusions drawn from a broad basis, and this is certainly true if the history of the case is under clinical observation, before a judgment may be formed.

Then I would close with this point regarding the X-ray examination. It is my belief that the study of the single examination with the stethoscope or the single plate or fluoroscopic examination of any single kind is not sufficient even to show whether a lesion is progressive. The physician does not expect to form a judgment as to whether a case is progressive from a single examination. He keeps some one observing the case for sometimes many weeks or months even though he knows the sooner the patient is under active treatment for tuberculosis the better. Notwithstanding that, he has to take time to form his judgment. If we can make a series of X-ray plates, two or three or more at certain intervals, done for comparison, there is some opportunity of finding whether or not we have a progressive lesion.

DR. PRESTON M. HICKEY, Detroit: I wish to commend the doctor upon the interesting presentation of the topic. I simply rise to suggest that we are going to be confronted with a new era in X-ray work of the chest. Most of the work done so far has been confined to chronic diseases of the chest. Most of the diagnoses have been of the chronic lung conditions and size, shape and activity of the heart. In other words, we have had to bring the patient to the machine.

We have this tremendous field of acute diseases of the chest which are now going to have the benefit of X-ray examination. Within the last few months, there has been developed by one of the great electric firms a portable machine which is really efficient. Up to this time we had to depend upon the little dress suit case kind of high frequency type in order to get plates with the patient in bed. It is necessary to have an efficient machine. This has recently been given into our hands and will probably come into general use very shortly, and the study of the acute diseases of the chest will receive aid from the radiographic plate. It being perfectly feasible at the present time with this type of machine to make plates of the patient in bed with an exposure of from one to half a second provided we have a current in the house. And no extra wiring is required. These new types of transformer will work on the ordinary lighting tap, not using over five or ten amperes of current.

The necessity was recently impressed upon me by seeing the plates made by Dr. Garvin during the recent flu epidemic at Detroit with patients at the city hospital, where it was shown a physical sign of pneumonia did not appear until the triangle of consolidation reached to the main bronchus. In other words, the X-ray showed it starting up the axillary border with practically no physical signs until it extended over the main bronchus.

DR. VAN ZWAGNENBERG, Ann Arbor: Concerning the implication in the doctor's paper concerning the value of the screen examination, it seems to me in this day when we have gone so far with the imperfections of the fluoroscopic examination of the

chest, it is rather futile to speak of diagnosing tuberculosis from the size of the heart. Our methods now are so far in advance. Our problems are difficult but the best way is to use the X-ray and study it along with the stethoscopic examination. The least we can do is to get the best possible plates and then use our best judgment.

DR. J. H. DEMPSTER, Detroit: I have nothing further to say except in reply to the last speaker, to refer him to the statements I have just made in my paper on the subject which he has evidently misinterpreted.

TRAUMATIC CHEST SURGERY.*

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KALAMAZOO, MICH.

The points that I wish to emphasize in this paper are based on the results obtained in approximately seventy-five perforating and penetrating gunshot wounds operated upon by my team during the late war and a smaller number that have come under my observation in civil practice.

If one were to give the indications for surgical interference in traumatic injury to the chest or its contents they would probably be:

1. Haemorrhage.
2. Sucking wounds.
3. Large retained foreign bodies.
4. Infection.

These indications will however be modified by the length of time that has elapsed following the injury, and by the character of the missile that has produced it.

In haemorrhage for instance, if the case is seen within a few minutes after the injury and is bleeding slowly, the question will arise whether to operate at once to prevent further loss of blood or to close the wound tightly and trust to the intrathoracic pressure to control the bleeding. If the wound was caused by a rifle or pistol bullet or by a stab with a sharp instrument, watchful waiting would be justified. If, however, the case is several hours old and still bleeding then immediate operation would be indicated. Also if the injury is the result of an irregular foreign body as shell fragment, piece of emery wheel or any object that would be likely to carry in clothing and dirt, and if this body is retained in the chest wall or chest cavity, then again no time should be lost, not only in the control of haemorrhage but also in the removal of all infected material. If a haemothorax is present but all bleeding has stopped and no other indication for surgical interference exists, the patient should be put in complete rest and the fluid left in the cavity for at least eight days as an early with-

drawal will almost certainly cause a renewal of the bleeding. If however the patient during this time shows any symptoms of infection, a small amount of fluid should be withdrawn and examined as to color, odor and bacterial findings. If the fluid shows a chocolate color with a foul odor then free drainage should be established at once regardless of the bacterial findings. If the *Bacillus aerogenes-capsulatus* or the *Streptococcus haemolyticus* is present then again no delay should be allowed but a thoracotomy performed at once.

At the end of the eighth day the fluid should be slowly withdrawn for if left in the pleural cavity too long, embarrassing restriction to respiration will follow the organization of the clot.

In sucking wounds of the chest if there is no indication for intrathoracic work the wound should be tightly closed after a thorough debridement down to the pleural cavity. In the debridement particular attention must be paid to the smoothing off of the ends of any fractured ribs otherwise the patient will suffer exceedingly during convalescence.

Retained foreign bodies as an indication for open operation has been a much discussed and disputed question. Our rule was to remove all irregular foreign bodies that the X-ray showed to be over one cm. in diameter, provided they had penetrated or perforated the chest cavity. I say perforated because even where the missile has passed through the cavity and is lodged in the chest wall beyond, there will almost certainly be an infected sinus that will ultimately infect the pleural cavity as well.

And this brings us to the fourth indication, infection. Here in my opinion there is no question as to the proper procedure. Repeated aspiration will not relieve the condition and the earlier that a thoracotomy is performed the better the outlook for early recovery. When for any of these reasons given it is deemed advisable to open the chest cavity the following procedure is carried out:

1. Free exposure of the operative field.
2. Wound packed with sterile gauze to prevent further infection by washing in surface dirt.
3. Dry shave followed by alcohol and iodine.
4. Removal of gauze and a rapid debridement to the pleural cavity.

From this point everything depends upon the character of the injury. If several ribs have been fractured the ends should be cut smooth, a rib spreader inserted at right angles to the fractured ribs, the resulting opening will then be of sufficient size to permit any intrathoracic

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work. If but one rib is fractured then the incision for debridement is carried parallel to the rib either anterior or posterior as the occasion requires, resecting at least four inches of the rib. With a strong rib spreader a free view of the pleural cavity can now be obtained.

Before going farther I wish to emphasize one point of chest surgery. Never open the pleural cavity with the patient lying on his unaffected side. As a rule the point of entrance is through the opening made by the foreign body and the operator will have no choice as to his route. If the opening is anterior to the mid-axillary line have him on his stomach with a small pillow beneath the diaphragm. If near the axilla the patient may be in either position but well-drawn to the edge of the table. Also there should be at hand a large wet towel with which one can quickly close the operative opening if the respiration becomes embarrassed. With the wound thus closed the breathing quickly becomes normal and the operation may be resumed.

After controlling all haemorrhage from the intercostals the pleural cavity is gently dried with large moist sponges and the lung itself examined to ascertain the amount of injury it has sustained. If the X-ray has shown a foreign body retained in the lung now is the best time for its removal. Grasp the lung with a pair of volselum forceps and draw the injured area directly into the opening. With a sharp scalpel excise all mutilated tissue down to and if possible including the foreign body. In this way particles of clothing, fragments of bone, etc., will be removed that might otherwise be overlooked. When a large area of lung tissue has been destroyed it is frequently advisable to excise a wedge of tissue beginning at the lung margin. With the wound made as near surgically clean as possible the haemorrhage is controlled and coaptation of parts obtained by deep mattress sutures inserted well back from the edge of the wound. If the foreign body has penetrated the opposite wall of the chest it may be possible to remove it through the chest cavity but as a rule I much prefer to make a second incision over the object from behind or in front as the case demands. When the diaphragm has been perforated, if on the left side the wound in the diaphragm should be closed from the pleural side and an abdominal opening made for complete exploration. On the right side, however, the opening should be enlarged and the vault of the liver exposed as this gives us the best access for closing wounds of this organ when located high up under the diaphragm.

After all haemorrhage has been controlled the cavity is once more sponged dry and a very thorough search made for spicules of bone. These may be found sticking into the lung tissue, into the parietal pleura, into the diaphragm or lying loose in the cavity. If these are not removed the patient is subjected to a large amount of unnecessary pain and delay in recovery.

With the cavity thoroughly cleaned the chest wall is next closed. In traumatic cases it will seldom be possible to close the pleura as a separate layer but this is unimportant. There should be a complete closure however by muscle and skin, a muscle skin flap from adjacent regions being utilized if necessary. No drainage is used. The resulting pneumo-thorax should disappear in three to four days. If it persists beyond this time it means infection is present and an aspiration should be performed to ascertain the nature of the organism. If the case remains clean the dressings are not disturbed until the sixth day when the stitches may be removed. The patient should be allowed from the start that position which gives him the most comfort. Loss of blood, shock, etc., are treated as in any surgical condition. Except when due to loss of blood there is however very little shock in chest surgery.

PROGNOSIS.

The mortality increases with the length of time that has elapsed following the injury. Cases treated by my team in field hospitals when received within three hours after injury, gave a 65% recovery. Those cases treated from eight to twelve hours after injury showed from 50 to 75% mortality. Many of these cases were moribund when received from the ambulance and were not operated at all. Death in nearly all of these cases was due to hemorrhage. Extensive lacerations of the diaphragm even with no injury to the abdominal viscera were unfavorable as to outcome. Wounds caused by rifle and machine-gun bullets were not operated unless bleeding freely.

CONCLUSIONS.

Extensive operations can be safely performed within the chest cavity without special apparatus. Ether anesthesia is well tolerated.

Do not allow position of patient or assistants or operators arms to restrict free movement of the unaffected side while operating. Have a wet towel at hand with which to temporarily close the chest opening if respiration becomes embarrassed.

Be sure that all rib ends are thoroughly smoothed and all bone fragments removed before closure.

Keep the patient quiet and warm as they are peculiarly subject to pneumonia often in the uninjured lung.

Rifle or pistol bullets may be left in the lung tissue with no apparent ill effects.

OBSERVATIONS ON SPHENOPALATINE GANGLION HEADACHES.*

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There are very few persons who do not suffer from headache in some form. The symptom may be so mild and so infrequent that it does not interfere with daily routine, and it can usually be attributed to a direct cause. I shall not discuss this type of headache, but the periodic headache variously described as "migraine," "bilious" and "sick headache."

Patients may have attacks of recurrent headaches for years. The attacks may appear every two months, four weeks, two weeks, and in some cases every week. The unhappy patient suffers greatly, is often handicapped so that he is unable to carry on his vocation in life, and in a measure becomes a burden to his family and associates. Too frequently he is cataloged as "neurotic" or "hysteric." It has seemed to me for some time that such patients have been neglected, and that many cases of headache which would fall into the group of sphenopalatine syndrome aches and in which much might be accomplished in the way of relief have been classified as cases of incurable migraine. It is due to the work of Dr. Sluder (4) that our interest in this type of case has been stimulated.

Briefly, the sphenopalatine ganglion or Meckel's ganglion is a small triangular body situated in the upper part of the sphenomaxillary fossa. Its greater dimension is a little more than 5 mm. It consists of an interlacement of fibres with neurones from the sympathetic system. Sluder, (3, 4) Fraser, and Pollock have called attention to the most minute anatomic relationship of the nerve mechanism of this region.

In the efferent nerve mechanism are preganglionic and postganglionic fibres, the latter directly exciting the epithelium of the glands to activity, and the relaxation of the muscle fibres

of the blood vessels; they originate in the sphenopalatine ganglion. The otic sphenopalatine ganglion and submaxillary ganglion are associated with the trigeminal nerve but are not a part of it. They belong to the autonomic system and are neither sensory nor motor. They emerge from the sphenopalatine ganglion fibres, pass to the glands and blood vessels of the mucous membrane of the nasal chamber, palate, and pharynx. The ganglion cells, although irritable, are without autonomic action and must be excited by impulses discharged by nerve cells in the central nervous system and transmitted by way of the preganglionic fibres which take their origin in the nerve cells in the gray matter beneath the floor of the fourth ventricle and pass forward, emerging from the medulla between the seventh and eighth nerves as the pars intermedia or nerve of Wrisburg accompanying the facial nerve as far as the geniculate ganglion. The fibres then pass forward as the great superficial petrosal nerve to the sphenopalatine ganglion. Thus nerve impulses discharged from the central nervous system are transmitted by way of the sphenopalatine ganglion and in turn are relayed in a peripheral fan-like manner to the glands and arterioles of the mucous membrane lining the nasal chamber. Animal experimentation has demonstrated that stimulation of the peripheral end of the great superficial petrosal nerve causes a discharge of secretion in the nose accompanied by a dilatation of the vessel walls. At the juncture of the great petrosal nerve and the internal carotid arteries a few sympathetic fibres become associated with it. The preganglionic fibres start in the vasoconstrictor center under the floor of the fourth ventricle, descend to the spinal cord, and pass out in the ventral roots through the upper thoracic region and thus reach the peripheral chain of sympathetic ganglion and pass up to the superior cervical ganglion. In this way a circuitous pathway is formed between the vasoconstrictor center and blood vessels of the nasal mucosa, and it can readily be seen that the blood supply of the nose is thus under the control of the vasoconstrictor and vasodilator of the brain. The nerve cells of the vasodilator and vasoconstrictor group have a certain tonicity which may be altered by nerve impulses transmitted from the nasal chambers to the trigeminal and from the skin. They may also descend from the cerebrum in response to psychic states of an emotional nature. The sphenopalatine ganglion is the most superficial of all sympathetic ganglia.

An analysis of these relationships and of the paths of the various nerve fibres warrants the

*Presented before the Section on Ophthalmology and Oto-Laryngology at the Fifty-fifth Annual Meeting of the Michigan State Medical Society, Kalamazoo, May, 1920.

assumption that the tonicity of the vasodilator and vasoconstrictor may be increased abnormally or decreased by changes in nutrition, faulty metabolism, and so forth. It may also be assumed that with impaired central tonicity, peripheral disturbances which previously had no effect, will manifest themselves by untoward symptoms in the nerve distribution of these centers. From the sphenopalatine ganglion fibres are distributed through the orbit, through the posterior ethmoid and sphenoid sinuses, some descending to the roof of the mouth, palate and tonsils, and mucous membrane of the nose, some to the septum, and some to the incisor teeth and upper pharynx. The symptoms accompanying this condition may be divided into two groups, the sympathetic and the neuralgic.

The symptoms of the sympathetic group are characterized by sneezing, lacrimation and hay-fever-like attacks, and are aggravated by face powder, perfumes, pollens, and so forth. They are established spontaneously, vary in character, and thus are the most difficult to diagnose and the most unsatisfactory to treat.

The neuralgic group is characterized by neuralgic attacks accompanied by more or less severe pain. The etiology is varied and often as obscure as the etiology of trifacial neuralgia. Foci of infection, metabolic disturbances, malnutrition, and other general disturbances are considered possible causes. Sluder believes the syndrome is due to local inflammatory disturbances in the region of the ganglion, a belief in which I concur. The symptoms of which the patients complain may vary according to the intensity or diversity of the disturbance; the most common is a distinct characteristic headache in which the pain seems to start behind or around the eye, radiate to the temple, to the point behind the ear, and into the neck. Occasionally it extends under the occiput and between the shoulder blades, or it may extend into the anterior neck muscles or down the shoulder, and rarely there is sensation of pain in the tonsillar region. One of our patients complained that during the attack the incisor teeth felt too long. The patient may or may not be nauseated to the point of regurgitation. Usually the headache becomes severe enough to necessitate the administration of an opiate. The duration of the attack may vary from two days to two weeks, and recurrences may extend over periods of from fifteen to twenty years without evident impairment of the general health. Occasionally a patient complains of slight symptoms with a periodic exacerba-

tion. Lacrimation and nasal discharge on the affected side, with injection of the conjunctival vessels, sometimes is an accompaniment. Examination of the patient's nose at the height of an attack demonstrates a tendency for intumescence on the affected side of the nose. The mucous membrane of the nose itself may be hypersensitive although more often it is hypsensitive. A low grade infection in the ethmoid and sphenoids may be the only pathologic condition found.

The foregoing symptoms might very easily be confused with a typical migraine headache, and absolute diagnosis of sphenopalatine headache can be made only by seeing the patient during an attack and relieving the symptoms by the local application of cocaine to the sphenopalatine ganglion. Many other types of headaches may be helped by the administration of cocaine in the nose, but the true sphenopalatine is completely relieved by this procedure.

When we have established the diagnosis of a sphenopalatine syndrome we attempt to put the ganglion out of commission by the injection either of alcohol or of phenol alcohol. The technic is that described in Sluder's text; a curved needle is introduced into the sphenopalatine foramen just behind the posterior end of the middle turbinate. From 0.5 to 1 c. c. of alcohol is injected with a Luer syringe. In some cases the ganglion is so superficial that the application of silver nitrate to the mucous membrane of the sphenopalatine fossa will accomplish the desired result. Great relief has often followed the treatment by daily installations in the nose of 0.5 per cent. phenol in mineral oil. In conjunction with the local treatment attempts are made to eliminate all possibility of foci of infection, such as in the teeth, tonsils, and sinuses. Very often opening the sphenoid and ethmoid sinuses, even in view of negative x-ray findings, has been followed by relief. It should be borne in mind that an end result, not a cause, is being treated. The prognosis must be somewhat guarded. The ganglion is small and naturally it is almost impossible to penetrate it with a needle. Our best efforts result only in bathing the ganglion with alcohol, and this simply means a period of from six to nine months of relief, since the ganglion fibres will regenerate. But even this respite from pain and discomfort is well worth the effort. In the past year we have treated sixteen patients with sphenopalatine headache. Seven patients were injected with alcohol; the

remainder were treated with silver nitrate and phenol.

CASE HISTORIES.

Case 1 (252135). Mrs. J. E. C., aged 28, came to the clinic Nov. 19, 1918, complaining of frontal headache and pain in the left eye radiating back of the left ear, of three months' duration. The condition was relieved by cocainization of the ganglion. Subsequent treatment of 0.5 per cent. phenol in oil caused further improvement.

Case 2 (253078). Mrs. C. D. D., aged 37, presented herself at the clinic Dec. 16, 1918. The general examination was negative. Roentgenograms of the sinuses, the heart, and the chest were negative. The tonsils and teeth were negative. The patient complained of severe headache over the right eye which increased in severity until she was forced to go to bed. There was lacrimation of the right eye, and some pain in the shoulder blades. There was some evidence of low grade salpingitis. This patient was seen during the attack of headache and cocain was applied to the sphenopalatine ganglion with immediate relief. Within a few days the ganglion was treated with silver nitrate, and the right sphenoid sinus was opened and treated with phenol in mineral oil. Fourteen months later the patient wrote that she had had one slight attack since her treatment. Her general health had improved.

Case 3 (273739). Miss I. E., a school teacher, aged 29, had had pain in the left neck and in the ear for five years before examination in the clinic June 20, 1919. Her tonsils had been removed, dental sepsis cared for, and a submucous resection performed, but the pain continued. The ganglion was cocainized with immediate relief, and silver nitrate was applied. Three months later the patient reported that she still had attacks, although mild.

Case 4 (275485). Miss C. S., a school teacher, aged 25, came to the clinic June 28, 1919, because of pain in both ears and in the neck for several years. The general examination showed chronic otitis media, slight dental sepsis, and chronic mastitis. The ganglion was treated with silver nitrate with complete relief of pain. The patient has not been heard from since.

Case 5 (279016). Mrs. J. M., aged 24, was examined at the clinic July 9, 1919. She complained of having had headache back of the eyes for several years. Her tonsils had been removed, and a submucous resection performed without relief. The ganglion was cocainized, and the pain disappeared at once. The patient was unable to remain for treatment, but undoubtedly this is a clear-cut case of ganglion headache.

In some cases cocainization gives partial relief, but these are not typical since they do not have the true sphenopalatine syndromes, and further search for pathologic lesions should be carried out.

Case 6 (280844). Mr. F. K., a farmer, aged 46, came to the clinic July 21, 1919, complaining of pain in the right temple. He had had dental sepsis, the tonsils were septic, and the sinuses negative. The Wassermann test was negative. The patient was seen during the attack and was cocainized with some relief. The eye grounds revealed edema of the nerve heads, and the Barany tests evidence of intracranial pressure. It is evident that in this case injection would not have been suitable treatment. These border-line conditions should be looked for in patients showing irritation from intracranial pathologic conditions.

Case 7 (285352). Mrs. D. H. F., came to the clinic Aug. 8, 1919, complaining of pain in the right eye, extending to the neck, which had lasted six years. Rhinorrhea and lacrimation were present, and the conjunctiva was injected. The general examination and the Wassermann test was negative. The sphenopalatine ganglion on the right side was cocainized during an attack with immediate relief. Several treatments of silver nitrate were given and the patient was completely relieved for four months. The patient lives a great distance from the clinic and was therefore advised to see a specialist near her home for a continuation of the treatment.

Case 8 (290362). Mr. M. E. S., a farmer, aged 43, presented himself at the clinic complaining of having had pain for eight months in the ears and eyes, and extending into the neck. The general examination, the Wassermann test, and the roentgenogram of the sinuses were negative. The teeth had been removed. There was no evidence of infection in the nose or tonsils. Sept. 25, 1919, the sphenopalatine ganglion was injected with 0.5 c. c. of alcohol. The patient was completely relieved, returned home, and was able to work on the farm, which he had not been able to do since the onset of the disturbance. Five months later he returned with a slight pain behind the ear, but not enough to interfere with his daily work. Local application of 50 per cent. of silver nitrate afforded relief. April 20, 1920, the patient was still in excellent condition.

Case 9 (293108). Mr. J. R., aged 51, employed in the oil fields, had had pain in the right temple, ear, and neck for a year and two months. He had been nauseated occasionally. The general examination was negative. Except for slight pyorrhea the teeth were in good condition. The

sinuses and tonsils and the Wassermann test were negative. October 22, 1919, the right sphenopalatine ganglion was injected with 0.5 c. c. of alcohol; this gave complete relief, and to our knowledge the patient has had no further trouble.

Case 10 (285754). Mr. A. W. R., a telegraph operator, aged 43, had suffered with pain in the left ear and neck for fifteen years, recently severe enough to handicap him in his work. During the height of pain any movement of the cervical muscles produced marked suffering. The general examination was negative. The teeth and sinuses and Wassermann test were negative. January 12, 1920, an attack was relieved by cocainization of the sphenopalatine ganglion. January 13 the ganglion was injected with alcohol which caused severe reaction for twelve hours, followed by complete relief. During the next four months there was an occasional mild attack, but not severe enough to interfere with work. This patient will probably need further treatment.

Case 11 (204466). Mrs. D. C. McV., aged 28, had had severe pain in the left eye and temple with "lower half" headache for six years before she came to the clinic Aug. 9, 1917. The patient's gallbladder and appendix had been removed. A roentgenogram of the sinuses was negative. The sphenopalatine ganglion syndrome was not considered. The patient returned Feb. 2, 1920. The headaches had become more severe and more frequent. Cocainization of the ganglion during an attack afforded relief. Injection with alcohol and subsequent treatment with silver nitrate improved but did not cure the condition. The sphenoid and posterior ethmoids were opened on the left. This case has been very stubborn, but in view of the negative general findings and the fact that the nasal treatment has helped, I believe that the headache is nasal or ganglionic. The patient is still under observation.

Case 12 (307903). Mr. W. P., a business man, aged 36, examined at the clinic March 3, 1920, had suffered fourteen years from hyperacidity. Pain over the left eye, extending to the neck, was associated with nausea. The general examination was negative. The cocainization gave partial relief. This patient did not remain for further observation.

DISCUSSION.

Many cases of ganglion headache yield immediately to treatment, but cases such as Case 7 offer many problems and are very discouraging both to the patient and to the physician, and only by persistent effort can satisfactory

results be expected. With more work and reports of results in these cases it is hoped that we shall be able to isolate and classify several distinct types of headaches, and thus offer a more happy future for these unfortunate patients. The physician who makes a diagnosis of headache without effort to learn the cause and offer relief is unjustifiably shirking a tedious problem. The situation should be explained to the patient and the necessity for co-operation emphasized so that he may be willing to remain under observation.

CONCLUSIONS.

There is ample evidence to demonstrate the existence of a sphenopalatine ganglion syndrome and to distinguish it from the so-called migraine headache. The results of treatment in this type of headache are sufficiently encouraging to warrant its study and investigation. Eventually we may hope to develop a form of operative treatment, such as is now used in the gasserian ganglion cases, which will offer more complete and permanent relief. In the meantime, by conservative measures many patients can be relieved whose suffering may even result in an economic loss to society.

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DISCUSSIONS.

DR. B. N. CULVER, Battle Creek: Mr. President, I have three questions that I would like to ask: The first is whether the doctor has ever seen a case that had both sides involved, that is, where there are intermittent attacks, one on one side and then one on the other.

The second is whether he has any suggestions to make as to the underlying pathology, whether sphenoid sinus or some other pathology nearby. And the third is if he would tell us something as to the age of his patients.

DR. HAROLD WILSON, Detroit: I would also like to ask him a question: Whether in connection with the nervous apparatus which he described in the beginning of his paper there is any

part of that apparatus that is related to exophthalmus, that is in the ordinary sense of a bilateral exophthalmus or monolateral exophthalmus such as we get in thyroid disease, where there is no thyroid disease, but an exophthalmus which is intermittent, for I have a patient of that kind in whom I am taking some interest at this time in endeavoring to find out the pathology or etiology of the underlying conditions.

DR. R. E. MERCER, Detroit: I would like to ask Dr. Barlow a question: Isn't it better to put this needle in without an anesthetic, because when you get it into the ganglion you know it, or at least the patient does, for when you get it into the ganglion he will have a sharp pain, and you know then that you have got it into the right place.

DR. HAROLD WILSON, Detroit: It might also be asked if the chairman might venture to ask a question again, as to what is to be done in those cases of nasal-stenosis, where, through the displacement of the middle turbinate, access to the sphenopalatine ganglion is not possible through the nose.

DR. ROY A. BARLOW, Rochester, Minnesota: I believe that we have not had any patients under twenty-four years of age. I have been working with these cases for about a year and a half, and in that time I have seen no patient less than twenty-four.

On the way here I stopped off at St. Louis, to visit with Dr. Sluder. We discussed this type of case. In his experience also it has not occurred in children. Most of his patients are twenty-four or more.

Another question that was asked of me—not from the floor, however, was with regard to the matter of sedentary life, whether a patient leading a sedentary life seems to be more prone to develop this type of neurosis than a patient working out of doors; we find the disease in farmers and in men working out of doors as well as in persons working in offices.

I am glad to hear the question of bilateral manifestation brought up, because I have such a case now. I feel that either we have not diagnosed the case properly, that it is not a true sphenopalatine ganglion case, or that the ganglion itself may be in an anomalous position, and we have not reached all the fibres, and simply stirred up the condition, or there may be a low grade sinus involvement associated with it.

With regard to exophthalmos: We have never noticed a relation. This is the first time that my attention has been called to the association.

Inserting the needle without an anesthetic of

course would be ideal if the patient would co-operate. We do not have a very good formula when we use a local anesthetic. The doctor who spoke of this point said that the patient's sharp pain, as from the nerve of a tooth or a sudden attack of the pain which characterizes the pain indicates that the ganglion has been reached by the needle. With some phlegmatic patients we are able to work with a local anesthetic. Others who have suffered so much that they are apprehensive are very difficult to control and from whom to obtain co-operation.

We at first thought that these headaches were due to a deflected septum, or the fact that the nose was stenosed. We dissected and corrected the turbinate away from the point of contact, and we even removed portions of the posterior end that seemed to interfere, and the patients still had the attacks. While they were cocaineized they were free from the attacks but after the cocaine had been expended the pain returned.

I was asked whether these headaches are continuous. Sometimes they are. Sometimes the patient complains of a dull headache with acute flare-ups and sometimes the patient feels perfectly well between attacks.

I believe that we are apt to become enthusiastic over our first two or three cases successfully treated by a new method. I have presented my paper therefore, not with the idea of reporting many cases but simply in order to interest someone in this work so that there may be further classification and, I hope, better methods of diagnosis.

CHAIRMAN'S ADDRESS: SURGICAL SECTION.*

A. O. HART, M.D.

ST. JOHNS, MICH.

Gentlemen:

I first desire to say to you that I very much appreciate the honor of having been elected Chairman of the surgical section of our State Medical Society.

A program has been arranged by your very efficient secretary, which will, we believe meet with your approval and which we hope will prove of interest to each and every one.

The assimilation and application to civil practice of the many valuable facts, brought out

*55th Annual Meeting, Michigan State Medical Society, Kalamazoo, May, 1920.

by the experience of military surgery during the world war, has been steadily progressing, greatly to the benefit of the civil practice and especially industrial surgery.

In reviewing the surgical literature, attending various clinics and society meetings during the past war, I have been particularly impressed with the fact, that considerable of the surgical progress has been along certain lines.

A great deal of study and thought has been given to the more careful and thorough preparation of patients for important surgical procedures, and a considerable amount of attention has been directed toward the after treatment of surgical cases, not during, but after surgical recovery.

The urologists to a marked degree have drawn our attention to the conditions of the blood and eliminative organs as having a large influence on the mortality following surgical operations. The amount of urea in the blood and its daily output through the kidneys, the hydrogen ion concentration, the reserve alkali of the blood, the carbon dioxide elimination through the lungs, and many other factors have all been carefully studied and valuable facts gleaned therefrom. The practical application of these, both in examination and in treatment preparatory to not only genito-urinary, but many other surgical procedures, is bound to have a material influence in lowering mortality rates and therefore lessening danger. The normal reserve alkali of the blood is no doubt an element of safety in surgery.

The administration of most anesthetics and the performance of operations, both to some degree diminish this alkali. If prolonged or severe an element of danger is introduced and as the point of neutrality approaches, physiological function may be seriously disturbed. Probably many of the untoward symptoms from which surgical patients suffer, may be and oftentimes are due to this very element, which can best be prevented or overcome by attention to maintaining the necessary reserve alkali of the blood serum.

The dissemination of knowledge among the public, general as to the importance of early

surgical treatment, especially in malignant diseases and acute surgical conditions, is also progressing. This leads to a more successful application of surgery both as to the lessening of immediate danger and better ultimate results.

There is also a keen realization that surgery has its limitations, as it can only correct pathological anatomy, while the pathological physiology resulting from the disease and some times from the operation as well, must be corrected by natural process or by medical treatment carefully applied.

A closer co-operation between the surgeon and the physician is needed and is coming about. A surgical patient instead of being sent home, often with merely a few directions as to care, etc., as in many cases in the past, is being and will be more often in the future referred back to his or her physician for medical supervision and treatment, in order to complete the work begun by the surgeon, which is the restoration of the patient to physiological as well as anatomical health.

Normal resistance must be built up and strength restored that the patient may again become an active and useful member of society. All this takes time and cannot in most cases be accomplished in the short time the patient is under the surgeons care.

Important advancements are constantly being made along other lines, but it seems to me that these are of paramount importance, at least in relation to the safety and success of our work.

REPORT OF A CASE OF WOUND DIPHTHERIA.

GEORGE J. CURRY, B.S., M.D.

FLINT, MICH.

The purpose of this short paper is for the report of a case of wound diphtheria, occurring in one of my surgical cases at Hurley hospital. The condition developed in a suppurating wound following the excision of the right fibula for chronic infective osteomyelitis, of twenty years standing. The operation was conducted in two stages,

and the first positive culture was obtained two weeks after the second operation, which consisted of excision of the proximal and distal ends that were left in place following the removal of the shaft of bone four and one-half weeks previous.

The most important symptom present was **pain** located over the lower third of the thigh, in the knee joint, and over the upper two-thirds of the leg. Very severe, constant, and aggravated by the slightest motion of the leg. **Tenderness** and **oedema**, marked over the area described as the site of the pain. **Temperature**, A. M. 100----P. M. 104. **Membrane**, present over the entire wound area, grayish-white in color, and with bleeding present following the removal of portions of the same. **Blood**: 18,000 leucocytes, with 80% polymorphonuclears, 14% small lymphocytes, 6% large lymphocytes, present.

Eighty-one days elapsed from the time of the first positive culture until the last negative one, the first fifty-six days of this period being the active stage of the disease.

The diagnosis is of course distinctly evident when the Klebs-Loeffler bacilli are found in the successive cultures, and accordingly the associated train of symptoms fit in well with the picture, as they are the characteristic findings of diphtheria, generally and locally, in its usual location, viz., the upper respiratory tract.

In this case, several possibilities presented themselves: (1) Osteomyelitis of the tibia, (2) patellar bursitis, (3) acute infective arthritis of the knee-joint, (4) thrombophlebitis. The first, osteomyelitis of the tibia, was eliminated by a negative Roentgen-Ray plate made three days prior to the positive findings of diphtheria. Aspiration of the patellar bursa did not reveal anything, and upon aspiration of the knee-joint a sterile fluid was obtained. The latter possibility seemed the more probable of any, but the finding of the Klebs-Loeffler bacillus made the final diagnosis certain.

The treatment consisted of rest, complete isolation, general symptomatic treatment, rigid asepsis while doing the dressing, local antiseptic dressings of Dakin's solution, iodine, tri-chlor-acetic acid, and brilliant green, and the administration of diphtheria antitoxin.

On the day following the positive findings ten thousand units of diphtheria antitoxin were given. This was followed in twenty-four hours by a rise in temperature to 104 degrees, and in the follow-

ing twenty-four hours by a drop to 100 degrees. In a few days it became normal where it has remained. In spite of the drop in temperature, there was a persistence of all the aforescribed syndrome for eight weeks, and in spite of another injection of ten thousand units of anti-toxin, four weeks after the first injection. During the next five weeks there was a distinct gradual subsidence in the intensity of the local symptoms, and accordingly the patient's general condition improved. There were also beginning areas of healing appearing throughout the wound which have enlarged until at the present time the wound is entirely healed, and the patient is able to move the extremity in all directions without pain. The oedema is entirely absent over the site of the previously described area. There is, however, some oedema of the soft tissues of the upper thigh, which I attribute to disturbed circulation. There is very slight flexion of the knee-joint. The patient's general condition is excellent, he being able to walk with crutches. There is some shortening of the extremity. X-Ray examination on June 17, 1920, showed no inflammatory involvement of the tibia, knee-joint or femur; but there are some areas of new bone formation along the outer edge of the interosseous membrane in the site previously occupied by the fibula.

The report is made by Fitzgerald and Robertson of an outbreak among returned soldiers. The time required to clear up these infections varied considerably. Of the twenty-eight patients first observed twenty-three had two successive negative cultures and were discharged in six and one half weeks, or less. The average stay of the first twenty-three patients was thirty days. Five still gave positive cultures over six weeks after the nature was ascertained. The men were isolated, given antitoxin, dressed with rigid asepsis, and wounds painted with an antiseptic.

In conclusion I wish to emphasize two important features of the case viz: (1) the importance of bacteriologic examinations of all suppurating wounds, especially those of long standing, as in these the suspicion of diphtheria should be most marked. (2) The **severity** of the subjective and objective symptoms, which might lead us to employ more radical therapeutic measures, viz: Administration of diphtheria antitoxin over a longer period of time, in the future treatment of such cases.

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August

Editorials

A CABINET PORTFOLIO OF PUBLIC HEALTH.

Despite the meager pronouncement of the Republican Party's plank on public health the opinion is more and more pronounced that we are on the eve of a reorganization in our National Health Administration policies. Reliable information indicates that the reorganization will centralize our present activities with a Secretary of Public Health who will hold a cabinet portfolio. This is the direction toward which we have been working and which has been sought for by our health organizations and officials. It is the only solution whereby it will be possible to institute effective health measures. There can be no refuting of this argument. It is a coming administrative activity.

When it is consummated much will depend upon the selection of the person chosen as the

first secretary. He will do much to forestall criticism. His fundamental plans will determine future policies. His reputation and integrity will raise the department above the baneful interference of party politics. His training will inspire scientific investigations and administrative measures. His professional standing will induce cooperation and compliance by the profession with all laws and regulations. The first Secretary must be characterized by these principle qualifications.

In casting about for such an individual we are certain that Michigan has a candidate possessed of all these qualifications and one who has already attained an international reputation—Victor C. Vaughan, Sr.

Dr. Work, President of the American Medical Association, stated at our Annual Meeting in Kalamazoo, that Dr. Vaughan was one of the three greatest medical men in this country during the recent war. The work done by Dr. Vaughan for our military forces stands out to his credit and distinction. His activities in behalf of the conservation of public health and creating healthy environments, the eradication of tuberculosis, the prevention of contagious diseases, the better care of the sick, the community plan of health administration, the improved standards of medical education and many other movements directed toward lowering the incidence and mortality of disease have all received the benefit of Dr. Vaughan's wisdom, advice, labors and endorsement.

It is impossible to even summarize in this brief editorial the direction and scope of his activities along the lines of health conservation and prevention of disease. Dr. Vaughan is known for what he has accomplished throughout this country as well as internationally. His recognition and prestige is unassailable. His integrity undisputed.

It is for these as well as other reasons that we put forth and urge that a nation wide movement be instituted to present Dr. Vaughan's qualifications and the profession's endorsement of him to the new President and Congress to obtain his appointment as the first Secretary of the Nation's new Department of Public Health. We deem Dr. Vaughan the best qualified individual for that office.



The above is a photographic reproduction of the Memorial Tablet, placed by our State Society in the Medical Building of the University of Michigan to commemorate those of our members who made the supreme sacrifice during the World's Great War. The presentation was made at our 55th Annual Meeting held in Kalamazoo, May, 1920, by Dr. Herman Ostrander for the Society. Dr. V. C. Vaughan, Sr., accepted the tablet in behalf of the Medical Department of the University. The presentation and acceptance addresses were published in our July issue.

ARE OUR ANTI-TUBERCULOSIS ORGANIZATIONS FAILING TO FULLY MEET PRESENT CONDITIONS?

The above interrogatory is made not in the spirit or intent for criticism. Neither do we imply that all the activities of the past and

those of today are unavailing and disappointing in their end results. We unhesitatingly assert that great progress has been made and many individuals have achieved a large amount of good by their educational movements and fight against tuberculosis.

There has been made available statistical information as to the prevalence of tuberculosis. The public and profession has been educated as to preventative measures. Clinics have been held so that individuals in practically every community have been provided with repeated opportunities to secure personal physical examinations. The modern methods of precision in diagnosis have been clearly outlined and dwelt upon. In brief, the entire subject has been most efficiently covered from both lay, and professional standpoint. In that direction much has been accomplished in the past decade.

Today we know that rest, fresh air and nour-

ishing food will accomplish an arresting of the infection if persisted in. We know that institutional care increases the chances of arresting the disease. The opinion expressed by authorities indicates that Sanatorium treatment for the infected one is the most efficient curative agent. However, in spite of this opinion, someone, someway, somehow has failed to sell this advice to our County Supervisors and our State Legislature. It is stated that today in Michigan there are 25,000 tubercular infected persons and in our county and state sanitariums there are but an odd 1,000 beds available for the treatment of these cases. Among our ex-service men of the recent war there have already been reported over 1,100 who are the victims of active tuberculosis and for the provision for institutional treatment of their cases the State has taken no steps to secure additional beds than what are now available in established sanitariums. It is these incidents that cause us to wonder if we are not failing to meet present conditions.

We must go further than to provide institutions. We must create an effective demand to obtain sufficient institutional beds. We must educate the public and the infected person that institutional care is imperative. We must make them willing and desirous to secure sanitarium care. We must make them willing and content to remain in a sanitarium until their infection is definitely arrested.

To remain until they are pronounced arrested cases—it is this that causes us to again interrogate whether we are not failing in this feature.

Almost every physician has had one or more cases of tuberculosis that have gone to a sanitarium for treatment. They remain for a varying brief stay and return to their home un-improved, the disease active and eventually a fatality ensues. Why didn't these cases remain until arrested, especially those that were in incipient stages and the prognosis favorable? The Sanitarium to which they went was well managed and provided fresh air, nourishing food, rest, medical supervision and nursing. In brief the factors for obtaining a "cure" existed and were ideal. Still, the patient would not remain. Why?

Invariably the reply would be, "Oh, I got so tired of the place," "I became so homesick," "I couldn't stand to just stay and be there with nothing to do," "I would have died if I had stayed another week." Such is the appraisal these patients make, these are the reasons why they do not remain. Of course there are exceptions and other causes but the nostalgia, ennui and sameness of day after day is the principle reason for failure to remain. Is it not pertinent and meritorious of discussion to inquire whether we are not failing in our endeavors if this reason for patient's departure before their diseases is arrested stands out so prominently? Are we neglecting an important feature of Sanitarium treatment?

It seems that in addition to rest, air, food, medical supervision and care our sanitariums must go one step further and provide some form of occupational training, education and entertainment. Something must be done to prevent homesickness, to induce patience and contentment and to create a surrounding that will cause a patient to remain the required time to produce a definite arrest of his disease. Some definite policy must be created to combat the discharge of patients who under present methods leave for the reason enumerated.

We are appreciative of the fact that there exists a typical and possibly peculiar mental attitude in tuberculosis patients that has to be contented with. Notwithstanding, we feel disposed to assume that we are failing to a large degree if we do not surmount this difficulty.

Unless we accomplish the providing of a sufficient number of beds, the education of the public that sanitarium care alone enables us to best combat the disease and limit transmission, the establishment of vocational training, education and other measures to overcome and prevent so-called homesickness, the contentment of the patient until pronounced an arrested case—until we institute and accomplish these features we are failing in our endeavor to fight and eradicate tuberculosis. We feel it is the province of our Anti-tuberculosis Societies to bring about the solution of this feature of their special field of activity. We also are of an

open-mind and invite a discussion of the interrogatory advanced. We also solicit reasons why with some 25,000 cases in the State but 1,100 beds are available. What is being done done to obtain more sanitarium beds?

OPPORTUNITIES IN MEDICINE.

One is inclined to think oftentimes that owing to the influx of so-called new methods of treatment of disease, such as osteopathy, chiropractic, New Thought, Christian Science, Faith Healing, Spiritualism, Nature Cure, various forms of diet cures and exercise, that the art of medicine does not offer particular inducement to one entering its ranks. So much has been said about the length of time necessary in order to obtain a degree, and the poor financial returns as a result, that people have gotten the idea that medicine is in a very low way financially, but I think this is entirely erroneous.

One has only to look over the advertisements in the medical journals where physicians are wanted, and it is really astonishing to see what inducements are being offered in order to get physicians to locate in places where there is no doctor available.

The hospitals are crying for physicians, and the young man about to graduate can almost get anything he desires in the way of an Internship. Public institutions, such as asylums for the insane, private hospitals, etc., are even paying men good salaries—a thing almost unheard of in the past.

To me this seems like the golden age for the physician. There are more avenues open for the practice of his profession than ever before.

The Army, Navy and Public Health Departments, the Indian Service, Coast and Geodetic Survey and Panama Canal all require more men, and there are at the present time many vacancies in each of the branches mentioned above, especially in the Army.

1. If Congress passes the bill now before them for an increase in pay for the above branches, it will serve to make the various departments more attractive from the monetary side.

2. Nearly every township now has a health

office, and as the schools are giving the question of sanitation more attention, the value of the physician and the health officer will increase. Many of the schools are offering a post-graduate course to fit men for this special work.

3. *Industrial Surgery*: The passage of the Workingmen's Compensation Act has made it almost compulsory for large industrial plants to have their own staff of physicians; not only to do general surgical work, but X-ray, Eye and Ear work, etc. Such positions are usually valuable in more than one way—a good salary, the opportunity for work and a large acquaintance, which should be of use later on.

Life Insurance: All of the large companies are now employing physicians on full time; men who do the work of medical directors, a most responsible position, dealing as it does with medical selection—next to the management. The Medical Director occupies the most important place in my estimation, as upon his decision rests the financial stability of the company. Poor selections would ruin the best managed institutions. Besides medical selections, the Medical Director has the appointing of the Medical Examiners in the field, the looking after of the laboratory work, correspondence, classification of data regarding mortality, etc.

To the physician who would like to do this as a life's work, it has possibilities, but I do not think it should be entered into without realizing its limitations. Life Insurance is a business with all the attendant risks to those who engage in it.

Medical Missionaries: The slogan of today is "SERVICE." To the physician who is interested in doing all that is within his power for humanity's sake, the Medical Missionary field offers an unlimited field. The man who goes out to do this work will never want for patients, as one has only to read about this world, or talk with one of them and he will be struck by the immense need for workers in the field.

To the young christian doctor who feels called upon I can only say that the field is wide and laborers few. This, of course, is not to be considered from a monetary standpoint, but, as stated above, for "humanity's service." God

bless the men and women all over the world who are doing this work.

Scientific Work In Colleges: OWING TO THE DEMANDS OF VARIOUS FORCES which look after the medical colleges, there is now an absolute necessity for any school, which wishes to remain in the A-1 list, to have a certain number of full time men. These men are paid salaries—rarely enough—but I think the future is brighter in this respect. For the man who wants to do teaching and laboratory work there are opportunities coming up constantly, thus widening the field.

In ending this article I feel that I can do no better than to quote the following from an article in *Scribner's Magazine* of May, 1919, entitled, "PUBLIC SERVICE"—The Physician's Duty.

"The professional man generally, and the physician in particular, has come to be looked upon as a public character, owing to a direct and peculiar service and duty to the public. He is one of a class of citizens who by education and experience has acquired a bigger, broader point of view than can be attained by the average citizen. His education and training give him an understanding of the interests of groups of people. The average man is accustomed to look to the physician for advice and direction in the extraordinary things of life, the things that are beyond the capabilities and experience of the average individual.

The community looks to the physician for public service as a part of his job. His standing and influence in the community force the community to look to him for this service. The medical profession has been brought forth from the laboratory and the office and placed in the limelight of public service. We have doctor-mayors, doctor-aldermen, doctor-governors, doctor-congressmen and doctor-senators. The public life which half a century ago was confined almost exclusively to the legal profession, now demands the services of all men with the broad point of view which is conferred by a professional education.

In assuming the responsibility of public service, the physician is not only performing his duty to the community; he is contributing di-

rectly to his own personal and professional success. The physician who becomes favorably known to his community through his public service, will soon become favorably known for his professional service. By no other means can the physician acquire so wide and so thorough acquaintance with the men and women upon whom his professional success depends as he can by public service."

WILLIAM J. STAPLETON, JR.

83 Cass Ave., Detroit.

MUTUAL ADMIRATION SOCIETIES.

In pawing over the many publications which somehow find their way to the desk of every editor, we came upon a splendid and practical discussion of "societies," in the *Engineering News-Record*. It is written by P. B. McDonald, assistant professor of English at the College of Engineering, New York University. This article contains what we have many times wanted to say, but it is so much more complete than we could have made it and written in so much better English than we could produce, that we are going to substitute it for the wisdom (?) usually contributed by the editors in this column. So, here it is:

"Of late years it has become fashionable to organize societies. The argument for them is that they cannot do any harm and might do some good. A nucleus of members is obtained by inviting a few people who have an ax to grind; others join because these joined. If all goes well, the society is soon holding regular meetings, choosing officers and committees, and publishing a periodical. Thus we have societies for promoting or preventing nearly everything that can be promoted or prevented—from using dental floss to docking horses' tails. As someone recently said, 'In this country one is asked, 'Are you succeeding at what you are doing?' in contrast with the French query, 'Is what you are doing worth while?'

"Perhaps it is true that this plethora of societies does occasional good and little positive harm. But they consume a great amount of time, and clutter up the mails, and emphasize

the American tendency for mutual admiration. At a typical meeting of a typical society Jones gets up and tells how he uses his dental floss or how he persuaded his neighbor not to dock his horse's tail. When he finishes his valuable and spirited talk (later to be published in the society's bulletin) Brown rises and compliments Jones on his masterly address before beginning his own story of the 'Brown method' of manipulating floss. Robinson then compliments both Jones and Brown, and adds his priceless opinion. Finally, the chairman compliments everybody and the meeting is adjourned. The only variation to this pleasant procedure comes when a member strays in who believes in criticism rather than in mutual admiration. But he is promptly suppressed as being 'impossible' or 'merely a destructive critic,' and the pink tea continues.

"While speaking of destructive criticism, which so many good people condemn, it might be noted that most of the great critics of history have been destructive, such as Horace, Boileau, Pope, Swift, Voltaire, Hume, Carlyle. They attacked the silly fads of their day in order that people might perceive more clearly the really great and eternal things, as Professor Babbitt of Harvard pointed out. It is the opinion of such keen observers as Paul Elmore that the world today needs a Pope or a Swift to satirize the foolish. Caustic criticism of, say the church, does not necessarily mean that the church is entirely wrong, but that its procedure at the time is wrong. Hume did not attack the beliefs of the church, but the false proofs that the church advanced in the eighteenth century. A destructive critic such as Hume clears the way for better building-up of belief. He should not be condemned for not doing the building himself. Furthermore, destructive criticism is suggestive—Hume woke Kant from his domestic slumbers—and in a way it is complimentary, since it implies that the subject attacked is important enough to warrant criticism. To call a man 'behind the times' may mean that, in a better humor, the critic would praise him for staunch loyalty to proved ideals.

"But, to return to the muttons, mutual-admiration societies are making Americans nar-

row-minded. The atmosphere of such gatherings is vitiating. A chemist who has come from a meeting of a chemists' society where only pleasant remarks are encouraged feels that chemistry is the be-all and end-all of creation. He is likely to become so chemically-minded that he almost ceases to be a human being. The society may discourage adverse criticism so thoroughly that it, itself, becomes tedious and humdrum.

"Possibly the mutual-admiration spirit is the consequence of what might be called the 'Polyanna' or 'glad' idea. It partakes a little also of the 'brotherly,' 'man-building' enthusiasm of up-lift movement, and a little of the 'advertise-yourself' principle of chambers of commerce. From all sides people are being urged to get together and form mutual-admiration societies. Employers are advised to give a half-hour talk each noon to their workmen so that the men can see what nice employers they have. Freshmen arriving at college are herded together to be lectured to by some sanctimonious fellow concerning the evils lying in wait for young boys fresh from home. As much as possible is being done by large meetings and associations; as little as possible is left to the individual. Is it any wonder that the number of flabby, uninteresting people seems increasing?

"Some years ago, when organizations were relatively few, a vigorous organization of selected persons could frequently advance their own interests considerably. But today, when every class or group is organizing, it is a public detriment to have so much partisan spirit displayed. Democracy, as Herbert Hoover has pointed out, does not mean a war of classes; rather it means a form of government under which the individual counts for something. A candidate for an elective office today cannot be a plain citizen; he must belong to all the fraternal and sectarian organizations possible.

Individual criticism has not been properly encouraged. It is the salvation of a democratic form of government.

Editors Note: We have also "cribbed" this article because there is so much food for thought that has a direct bearing upon our medical societies. We have also insisted that an

essayist is too frequently met with idle plaudits. As a rule our members are supplied with the subject of the meeting several days in advance. Why not take the time to formulate a helpful individual criticism?

part some of his personal history for the completion of our records.

Dr. McLean was born in 1862, of Scottish parents. He graduated from the Detroit College of Medicine and Surgery in 1886 and



ANGUS McLEAN, M.D., President

PRESIDENT MCLEAN

Dr. Angus McLean of Detroit, elected president of our State Society at Kalamazoo for the year 1920-21, requires no introduction to our members. We do, however, wish to im-

then served a two years internship in Harper Hospital. Upon completion of this course he commenced practice in Detroit, in the office of the late Dr. H. O. Walker. In 1895, he pursued a special course in the University of

Edinborough. Upon his return to Detroit he became a lecturer in anatomy in his Alma Mater, and conducted much experimental work in gall-bladder drainage, elasticity of the skull and the formation of thrombi.

Since 1895 he has been attending surgeon at Harper' Hospital. He was president of the State Board of Health from 1906 to 1910. He is one of the founders of the American College of Surgeons.

When the United States entered the world war Dr. McLean organized Base Hospital No. 17 and became its commanding officer, attaining the rank of colonel. He was in France over two years, finally being assigned special duty with the presidential party in Paris and returning with them in March 1919. He received a special citation for special work from the adjutant general of the U. S. Army and was recommended for Legion de honor to the French Government.

Thus might we continue and enumerate many more of Dr. McLean's activities and in every instance repeat how he has served his profession, locality and State. We are certain that the same aggressiveness, like activity and accomplishment will characterize his term of office as president of our State Society.

COMMITTEE APPOINTMENTS.

President McLean announces the following committee appointments for the ensung year. Appointees will please consider this as their official notification.

SPECIAL AND PERMANENT COMMITTEES

PUBLIC HEALTH.

C. C. Slemons, Chairman.....Grand Rapids

MEDICAL EDUCATION.

Guy L. Connor, Chairman.....Detroit

Victor C. Vaughan.....Ann Arbor

LEGISLATION AND PUBLIC POLICY.

R. M. Olin, Chairman.....Lansing

C. H. Baker.....Bay City

D. Emmett Welsh.....Grand Rapids

VENEREAL PROPHYLAXIS.

G. M. Byington, Chairman.....Lansing

A. H. Rockwell.....Kalamazoo

G. S. Sewell.....Detroit

TUBERCULOSIS.

H. M. Rich, Chairman.....Detroit

E. B. Pierce.....Howell

H. J. Hartz.....Detroit

William Kerr.....Bay City

J. Hamilton Charters.....Houghton

William DeKleine.....Flint

Harlan Mac Mullen.....Manistee

PUBLIC HEALTH EDUCATION.

J. S. Pritchard, Chairman.....Battle Creek

T. E. De Gurse.....Marine City

W. H. Honor.....Wyandotte

Max Peet.....Ann Arbor

CIVIC AND INDUSTRIAL RELATIONS.

G. E. Frothingham, Chairman.....Detroit

C. D. Munro.....Jackson

R. H. Nichols.....Holland

W. H. Sawyer.....Hillsdale

J. D. Bruce.....Saginaw

J. D. Riker.....Pontiac

F. B. Walker.....Detroit

C. D. Brooks.....Detroit

Guy Johnson.....Traverse City

INSURANCE.

F. B. Tibbals, Chairman.....Detroit

F. C. Warnshuis.....Grand Rapids

G. D. Miller.....Cadillac

A. W. Hornbogen.....Marquette

T. M. Williamson.....Saginaw

REVISION OF CONSTITUTION AND BY-LAWS.

W. T. Dodge, Chairman.....Big Rapids

C. E. Boys.....Kalamazoo

F. C. Warnshuis.....Grand Rapids

REGIONAL CLINICS.

E. L. Eggleston, Chairman.....Battle Creek

F. C. Warnshuis.....Grand Rapids

W. H. Marshall.....Flint

COMMITTEE TO CO-OPERATE WITH STATE TEACHERS' ASSOCIATION.

B. A. Shepard.....Kalamazoo

Ray Connor.....Detroit

A. D. Holmes.....Detroit

E. M. Highfield.....Riverdale

C. N. Sowers.....Benton Harbor

Editorial Comments

Recently newspapers recounted an incident where a well known professor of surgery of an Eastern college amputated the leg of a man to free him from the wreckage under which he was pinned. Within a few days the newspapers again reported the case of an ambulance surgeon amputating a leg of a man in the street while 2,000 spectators stood by and adds that the other leg was amputated while being carried to hospital in an ambulance. In both instances the man died. The former incident may have been justified, in the latter it was not justifiable to resort to surgery at the curb. Such methods are far from heroic and distasteful in their bids for notoriety. We anticipate "Tonics and Sedatives" will make further comment.

According to our daily papers Michigan and particularly Battle Creek, can claim a resident competitor to "Bone-Setter Reese." His picture and write-up has been appearing in the sporting pages. If we are not mistaken the Calhoun County Society will cause this alleged local artist to explain his skill to the State Board and local Prosecuting Attorney.

The attention of our members is called to the following from the Journal of the A. M. A.:

The Fountain-Head of Chiropractic; What of Its Product?

The Palmer School of Chiropractic advertises itself as "the fountain-head" of chiropractic. The following will give some intimation in regard to the character of the "stream" that comes from it:

The 1920 annual announcement of this school states that students are taught not only "how to act with patients in and out of the office" but also "how to successfully advertise." From the beginning, therefore, methods are taught which, from the time of Hippocrates, have been looked on as quackery. It is also stated that the students complete their "freshman," "sophomore," "junior" and "senior" courses in four months each, or altogether in sixteen months. In another place the reader is informed that, in case the student finds it impossible to remain for more than twelve months, the school will, nevertheless, confer on him the degree of D. C. (Doctor of Chiropractic). By remaining at the school six months longer he would be granted an additional degree, that of Ph.C. (Philosopher of Chiropractic), if he got "an A grade on each and every paper submitted."

The statement that a "common school" educa-

tion is required for admission may mean nothing more than the bare ability to read and write. Granting, however, that it is the equivalent of the eighth grade in the public schools, the professional training, according to the usual methods of calculating standards in general education, would be considered of no higher grade than that of one or one and a half years of high school work. This low entrance qualification is in marked contrast to the requirements for admission to medical schools in which students must have completed a four year high school course and in addition two years of work in a reputable college of arts and sciences, including courses in physics, chemistry and biology.

Another significant statement in this announcement is that a student "may matriculate on any week day." This indicates at once that no intensive course of study is given in this institution such as is required in medical schools. No student entering a medical school a week or more after the opening of any laboratory course (for example, histology, pathology or bacteriology) could possibly be able intelligently to carry on the work in such courses because of the large amount of work missed during the previous week's absence. Evidently, there are no such disagreeable handicaps in the study of chiropractic.

The announcement of this school states that in its "scientific course" the student is required "to attend" (note the exact figures) a total of 4,103½ class hours. This would be fifty-three hours a week for eighteen months, or eighty hours a week—twelve hours a day—for a calendar year. Education does not depend on the number of hours of instruction, however, so much as on the subject-matter taught and the ability of the instructor to impart knowledge. As a matter of fact, the requirement of actual classroom work in our highest grade medical schools in four college years of from eight to nine months each is only about 4,000 hours. Each class hour, however, presupposes from one to three hours of outside preparation so that, if measured by the claims of this chiropractic college, the total hours required by medical schools would be somewhere between 8,000 to 12,000 hours!

The textbooks used also are interesting. In anatomy, the text used is said to be that prepared by Mabel H. Palmer, D.C., Ph.C. (1905), the wife of B. J. Palmer, who is the president of the institution. Court reports in 1910 show that the latter had only a common school education and had never matriculated in any school, college or university, other than a chiropractic college. For

those who never had a training in the scientific methods of treating the sick, an attempt to teach others how to do so is equal to "the blind leading the blind." Textbooks of their own writing are also used by the teachers in symptomatology, gynecology and chemistry, who likewise have no degrees in medicine. Incidentally, the sale of these textbooks adds considerably to the revenue obtained from students.

Speaking of revenue besides the income from textbooks, this institution charges for its twelve or eighteen months' course a "spot cash" sum of \$300—more than a year's tuition last year in any of the highest grade medical schools of the country! If the fee is paid in "deferred payments," it is \$350. If a husband and wife, however, take the course the combined fee "spot cash" is \$375 or, if in "deferred payments," \$450. Reports of inspection of this school show that there are few, if any, all-time teachers. Such few laboratories as the school possesses are reported also to have the barest minimum of equipment. Most of the fees obtained, therefore, must be clear profit. This is in marked contrast with the teaching of scientific medicine in medical schools where the actual average expense of teaching a student each year is more than three times what the student pays in tuition fees!

The low ideals of the leaders of this cult are shown in the report of Mr. Justice Hodgkins of Ontario issued a few years ago. B. J. Palmer himself is quoted as having stated that bacteriology was the "greatest of all gigantic farces ever invented for ignorance and incompetency" and that "the analysis of blood and urine is of no value." In this same report other leaders of chiropractic deride also the study of materia medica and chemistry and state they have "no earthly use for diagnosis." They place themselves, therefore, in direct opposition to Pasteur, Koch, Laveran, Flexner and others whose discoveries during the last half century have revolutionized the practice of medicine and saved countless thousands of lives. No wonder Justice Hodgkins concludes that he could not bring himself "to the point of accepting, as part of the legalized medical provision for the sick, a system which denies the need of diagnosis, refers 95 per cent. of the disease to one and the same cause, and turns its back resolutely on all modern medical scientific methods as being founded on nothing and unworthy even to be discussed."

But the teaching in this particular school has further interesting tangents. There is also "The Universal Chiropractors Association" with headquarters, evidently at this Palmer School of Chiropractic. At least, B. J. Palmer and Frank

W. Elliott, the president and registrar of the Palmer School, are, respectively, the secretary, and the treasurer and business manager of the association. The members of this association—made up largely of graduates of the Palmer School—are promised protection from, and assistance in cases of, prosecution for violating the law in practicing chiropractic. According to the constitution, "The Association, except as herein otherwise provided, shall pay the fine and all costs in all prosecutions, civil or criminal, wherein any member of this class shall be charged in substance with having practiced medicine, surgery, osteopathy, or other method of healing or dealing with the sick or afflicted without a license, or other legal permission, provided such member is in good standing and shall have conformed to the Constitution, Bylaws and all Rules and Regulations of the Association."

The word "class" in this paragraph refers to "active members" who are described as "all chiropractors of good moral character graduated from or holding certificates of attendance from such chiropractic institutions of learning as are specific, pure and unadulterated chiropractics recognized by this association and are practicing without the use of adjuncts, etc."

The constitution and by-laws of the association are printed in a pamphlet of twenty-four pages, including two pages of instructions as to "What to Do If Trouble Starts." Among the fifteen items in these instructions the following are interesting:

11. Be conservative in your claims and be very careful that the enemy does not send any patient to you that they think will die on your hands or otherwise complicate matters. Do not, unless in a state or province where you are licensed, undertake to handle any so-called contagious diseases.

13. Have as many friends as possible present at your trial. Do not make any newspaper announcements without consulting your local attorney.

15. If trouble has not really started, but there are signs of it, let us hear about it by letter.

The graduates of this "school" are said to be practicing in Iowa—the institution's home state—in direct violation of the medical practice act and, according to the above, they are being encouraged to violate the law in other states.

From the foregoing statements it will be seen that the teaching conducted in schools of chiropractic is a menace to education and to public morals as well as to the science of medicine and to rational rules of public health. The conclu-

sions justified by the evidence submitted are as follows:

(a) Leading chiropractors deride or disbelieve in such well known and proved sciences as chemistry, bacteriology and pathology. Their teachings are not based on fact and are refuted by the accomplishments of the great minds in education, research, science and medicine.

(b) Their attitude toward these sciences shows their lack of sympathy for the first essentials in the prevention of epidemics and the regulation of public health.

(c) They declare that education and the ability to make a diagnosis are not essential for the intelligent treatment of human diseases and injuries.

(d) Their schools at most require only a common school education, a training insufficient to permit the student to undertake intelligently any but the most elementary course of study.

(e) Their course of professional (?) instruction is too short to enable the student to obtain a training in the sciences necessary for the intelligent or safe practice of the healing art by any method.

(f) The school teaches and encourages its students to advertise—which they are doing and using the same flagrant methods which have been employed by quacks since the beginning of medicine.

(g) Finally, the leaders of this cult openly urge their graduates to practice chiropractic in violation of the law, and have arranged through the Universal Chiropractors Association to aid and abet them in such outlawry.

In our last issue we had hoped to announce our President's Committee Appointments. President McLean was obliged to fill several engagements to deliver papers before some of our Western State and Canadian Society meetings and was therefor unable to send us his selection of committee men. They will be found in this issue. Appointees will please accept such publication as official notification of their appointment.

Be prepared for the twang of the campaign orator's voice but don't be misled by some of their rosy promises. "We were kept out of war" (?) once. We hardly believe we can be sold that way again.

Some individuals obtain considerable satisfaction in continuing in a state of non-responsive sameness. They dwell in a limited circle of activity and require more than a depth charge to

arouse them to the fact that they have greater responsibilities than those purely selfish and of a passive type. Especially do we refer to those of our members who are content to remain of the inactive type. If you are of this class we request that for at least once you become aroused and contribute to your county society at least 75 per cent of support. Help your local organization to put across its membership drive.

Our young hopeful approached us the other evening with the inquiry—"Dad, what was the biggest operation ever performed in Michigan?" Upon our admission of ignorance he replied: "Lansing, Michigan." Upon receiving a blank stare he said "Don't you catch on?—l-a-n-(c)-i-n-g Michigan." The ray of light penetrated. Of course this may be a "stale one" but we have never read it in "Tonics and Sedatives."

Work has been begun upon the 1921 Directory of the American Medical Association. For information regarding the personnel of the profession, their locations, specialties, society and hospital affiliations, state institutions, hospitals, practice laws, officers of societies, colleges and similar facts. We know of no other book, directory or bureau where this complete and reliable information can be obtained. Especially do we recommend it to our members because it is also a product of their own parent organization.

Unless the profession is alert and the doctors in attendance exercise their influence the nurse serving in industrial plants will overstep the boundary of nursing and practice. These nurses can and do a great good, but occasionally and certainly often enough to make the warning timely, they engage in the actual practice of treating cases.

There has been some complaint regarding our Michigan law requiring the reporting of persons infected with venereal disease. Our health officials deem this essential to combat the evil. When one understands the problem of controlling the spread of venereal disease it becomes apparent that such a provision is justifiable and a wise one. To the objectors we suggest compliance—more objectionable provisions might have been enacted.

We are just in receipt of an official permit from an Indiana health officer consenting to a syphilitic leaving his Indiana abode to come to Michigan and specifying a certain health officer to whom this individual is to report. The Indiana law provides that no person infected with a

venereal disease shall be permitted to go out of the boundaries of his locality without obtaining a permit to do so from the local health officer. And we are just a little inclined to the opinion that Michigan might well adopt a similar enactment.

Have you secured the application for membership from one or more of your fellow practitioners and handed it your County Secretary? Now is the opportune time. Will you devote the time to do so?

Correspondence

Mt. Pleasant, Mich., June 4, 1920.

To the Michigan State Medical Journal,
Grand Rapids, Mich.

While attending the Michigan State Medical Society meeting I was greatly interested in the sentiment expressed by the attending physicians over the old age and health insurance question. The sentiment was apparently unanimous against the enacting of a law of that kind. The erecting of a hospital at the county seat in each county or at the most accessible place in the county, would be a very great thing for the common people. The law as it now stands in this state furnishes medical attention to every person not able to furnish it for themselves, and with hospital facilities accessible. I see no reason for further legislation in this line. Because Dr. Vaughn knows nothing of the cure of disease does not mean that medicine is a failure. Dr. Vaughn's opinion upon the cause and prevention of disease is the highest authority known, but in the cure of disease he is helpless and of no value to the patient. This has been true for years and I was glad to hear the Doctor admit it, but that does not prove the science of medicine useless as the Honored Doctor claims. Because his great life work has diverted his attention from curative medicine does not prove that disease is not cured by medical help, it proves that the Doctor knows nothing of the truth of curative medicine. Now I agree that the State may do great good by establishing hospitals accessible to the people, but I do not agree with such men as Dr. Vaughn as to how they shall be run. I do not believe they should be controlled by the University medical faculty. The hospital medical service shall be under the control of medical men in the county where the hospital is located. It is claimed that the faculties of the colleges are better trained and

can render better service to the people than the Dr. S. of Mt. Pleasant or other like towns. The state has built great hospitals, furnished and equipped laboratories, furnished trained nurses gratis, and patients to practice upon, and yet the death rate from pneumonia is as high in the state hospitals as in the wilds of Isabella county. In the routine of emergency practice the number of days lost from accident or sickness is less outside of the state hospitals than in them, the degree of usefulness to which the man is returned, is as great, and the deformity is never greater than from the state hospitals, and we must pay \$30 per week for our nurses and furnish our own hospitals, and laboratories. We are daily in competition with the Doctors who draw their salaries from the state and who now want the State to collect their private bills.

Another question I was in hopes to see taken up at the State meeting was not mentioned, that is the Osteopaths practicing medicine. R. A. Northway, an osteopath, practices medicine and surgery every day and because of his privilege to advertise under the osteopathic law he gets a very large business. He poses as a Doctor and the town thinks he is a medical man and yet he has had no training what ever but tackles everything that comes along. But one person, in six years, has taken up medicine from this county but ten have taken up osteopathy and it is that way everywhere. The requirements for studying medicine are made more stringent every year but no protection is given the men who put in long years to fit themselves to practice medicine under the law, but a man from a high school may go to Kirksville 4 years of 6 months each and register in Michigan and then he can practice medicine with the best of us. Now what inducement is there for good men to study medicine, giving not less than 8 years after the high school before he can commence, and then stand equal in the community with the Osteopath? There never was any need for the existence of the Osteopath or the Homoepath if the men at the head of medical education were men of good judgment and tried to meet these questions honestly and fearlessly instead of ignoring them. Such men as Vaughn stand up and prate about the uselessness of medicine and the osteopath laughs and tells the people of it and it must be so because Vaughn says so, and the people fall for it and the Doctor Osteopath gets the business and the credit for cures he did not perform. The Osteopaths here operate and give anesthetics, set fractures, prescribe remedies the same as the M. D. Does he have a right to under the law? I have reported the matter to Dr. Harison but he

thinks I am mistaken and nothing is done. As I see it we all had better take up Osteopathy.

Faternally,

Chas. D. Pullen.

To the Michigan State Journal:

I have no quarrel with Dr. Pullen. If Dr. Pullen is satisfied with his success as a practitioner of medicine I am truly glad. My failures in practice always weighed heavily upon me, while my successes, if I had any, never elated me. It is true that ninety-two and a half per cent of the thousands of cases of typhoid fever for which I had some responsibility in the camps in 1898 recovered, but the seven and a half per cent that died always seemed to me an unnecessary sacrifice, although this is the lowest death rate from this disease that has ever been known in any great epidemic of typhoid fever. The deaths from pneumonia and kindred diseases in the camps in 1917-18 also greatly depressed me, although there never was an army of even half the size of ours mobilized with so low a death rate. So far as my private practice was concerned, from which I am now fortunately relieved, my failures always seemed to me to be more important than my successes. The former I was likely to attribute to my lack of skill, while the latter I attributed largely to nature. However I may say for my own consolation that there are hundreds of my old patients still living notwithstanding my ignorance who do not agree with me on this point.

Dr. Pullen is willing, it appears, to give me some modicum of credit in preventive medicine. I must confess that in this respect also I have not satisfied myself. Holding a responsible position in the Surgeon General's Office during the late war, and with the help of many of the best men in the country, I was not able to stamp out measles, scarlet fever, pneumonia and influenza in the camps. However, all this matters but little.

I now turn to the proposition that I made at Kalamazoo. I proposed that a bill be submitted to the next legislature of this and other states which would permit any county or section of a county to constitute itself into a health center and build a community hospital. Let us see how this would operate in Doctor Pullen's own county. Suppose that Isabella County should build a community or a county hospital according to the provisions of the proposed bill. This hospital would consist of several units: (1) A general hospital; (2) A tubercular pavilion; (3) An infectious disease pavilion; (4) A laboratory section. The staff of this hospital would consist of (1)

a commissioner of health of the county who would also be director of the hospitals and laboratories; (2) a surgeon; (3) an internist; (4) a laboratory man.

There should be in such a hospital at least one bed for every five hundred inhabitants of the county or the district. The hospital should be built and equipped and the salaries of the permanent staff should be paid by taxation of the people. There should be in the hospital a small lying-in room. There would be of course X-ray facilities. This hospital and all its facilities would be at the service of the people and of the practitioners of the county. Dr. Pullen having been engaged to take care of a case of labor could, if he and his patient preferred, have his patient go to the hospital a few days before labor and there, in an aseptic room and under aseptic conditions and with facilities at his hand for any emergency that might arise, could conduct his confinement case. Suppose that a case of scarlet fever occurred in a family under Doctor Pullen's care. This case could remain in the home if Doctor Pullen and the family desired, or it could be carried to the infectious disease pavilion where the patient would remain under Doctor Pullen's care. Suppose that Doctor Pullen had a case of laceration of the muscles of the thigh. He could treat this case in the home of the patient or he could carry the case to the hospital where he would have an aseptic operating room and where the surgeon might assist him.

Doctor Pullen would not be under the necessity of sending the swabs from suspected throats or the sputum from suspected cases of tuberculosis to Lansing, but examinations could be made in the hospital. I should have said that there would be connected with the hospital a sufficient number of trained nurses. If Dr. Pullen had a patient with any disease who needed a nurse one of these nurses from the hospital might be called upon, the patient if able might pay the hospital for this nurse, and if not able to pay, the nurse would be forthcoming at any rate. If Doctor Pullen wished an X-ray examination of a patient he could have it done in the hospital.

Dr. Pullen objects to the local hospital or a county hospital being controlled by the University medical faculty. I would also object to this. I believe that the local hospital should be under the control of a local board. I merely suggested that there might be the courtesy of mutual help between the University Hospital and the county hospitals. In doing so, I had in mind quite as much the good of University Hospital as I did the good of the county hospitals. In his county

hospital Doctor Pullen would have the opportunity of showing his great skill in the treatment of disease which I have no doubt he possesses, and when he had demonstrated his superior skill I advocated that he should be called to the University to instruct the students along his line. I do not believe that local affairs of any kind should be under the control of any outside authority. According to my idea, this county health center would provide for the inspection of all school children, for the visiting of all families who should wish their help by trained nurses, and I am sure that what I have in mind would be beneficial to the people of Isabella County, and at the same time beneficial to private practitioners of that county.

According to my idea, those patients who employed the facilities of the hospital or the nurses and who are able to pay, should pay into the hospital fund an amount to be determined by the local board and to be arrived at by their knowledge of the ability of the individual to pay. I propose sometime in the near future to go into more detail in this matter, and indeed I hope to have drafted sometime before the next legislature meets a bill which will embody my ideas, and it is my desire that this bill should be submitted to the practitioners of the state for suggestions, modifications, etc.

I have given in this letter a rough outline of what I have in mind. Such a bill was introduced into the New York legislature during the last days of its session a few weeks ago. It was not introduced with the idea that it would pass, but for the purpose of getting from physicians and others intelligent criticisms. I may say most emphatically that I object most strenuously to any local hospital being under the direction of University Hospital or of its having any relation to University Hospital which the local hospital does not desire.

Doctor Pullen says that it is claimed that the faculties of the colleges are better trained and can render better service to the people than the doctors of Mount Pleasant or any like towns. I do not know who made this claim. I have frequently said that when I was an active consultant I learned more from the local doctors than they ever learned from me. Doctor Pullen says that "the death rate from pneumonia is as high in the state hospitals as in the wilds of Isabella County is there any known specific for the treatment of this disease. Doctor Pullen says that "we must pay thirty dollars per week for our nurses, furnish our own hospital laboratories, etc." I propose that those who are able should continue to pay thirty dollars a week for

their nurses, or even more, but those who are not able to pay should have their nurses at the expense of the public.

In conclusion, may I say that I do not believe that there should be any compulsion upon anybody in this matter. The legislature might pass an enabling bill, nothing more. It would in no sense be mandatory. Isabella County could build a hospital or not, the physicians of Isabella County might utilize the hospital or not just as they pleased. Isabella County hospital might have as much relation to University Hospital as it desired, and if it desired none there should be no compulsion in the matter.

It is largely for the physicians of this state to determine whether this or some similar plan does or does not meet with their approval. I am not trying to force my ideas upon anybody. I repeat what I said at Kalamazoo, that I hope to see the day when there is no suffering among our people which human skill can relieve permitted to go unrelieved.

V. C. Vaughan.

Deaths

Doctor B. R. Schenck died June 30th, in Colorado Springs. Doctor Schenck ('Bob' as his friends used to call him) was born in Syracuse, N. Y., 49 years ago. He received his A. B. from Williams College in 1894 and his M.D. from Johns Hopkins Medical School in 1898. He took his internship in the Johns Hopkins Hospital. He successively was third, second and first assistant resident gynecologist and resident gynecologist in John Hopkins Hospital. Leaving Baltimore in 1903, he settled in Detroit and became actively connected with the Detroit College of Medicine and Surgery in the department of gynecology. He was on the staffs of Harper Hospital and the Woman's Hospital and Infants' Home. He became a very successful gynecologist in his adopted City of Detroit. For several years he was Secretary of the Michigan State Medical Society and the Editor of its Journal. He was very active in the Wayne County Medical Society and was its Acting President for nearly a year. He was the first Chairman of its Library Committee and placed the library on a firm and working basis.

Several years ago the Doctor's health began to fail. He gave up his work in Detroit and moved to California and then to Colorado. He has made a wonderfully plucky though unsuccessful fight for his life. He was always cheer-

ful and optimistic. A great loss has come to those of us who knew and loved him best.

Shortly after coming to Detroit Doctor Schenck married Miss Jessie Jean MacCallum of Hamilton, Ontario. He leaves a widow and two children, a boy and a girl.

Doctor Schenck was a member of Zeta Psi Fraternity, Detroit University Club, Indian Village Club (which he started) and Detroit Athletic Club. He was also a member of the Detroit Academy of Medicine, the American Academy of Medicine, the Wayne County Medical Society, the Michigan State Medical Association. Doctor and Mrs. Schenck were members of the Jefferson Ave. Presbyterian Church of Detroit.

"He is not dead, he is just away.

With a cheery smile and a wave of the hand,
He has wandered into an unknown land,
And left us dreaming how very fair,
It needs must be since he lingers there."

Doctor Lucy J. Utter was born on August 15, 1845, in Connecticut and died in Detroit on July 3, 1920. She obtained her early education in Minnesota and graduated from the Detroit College of Medicine in 1882. After graduating, Doctor Utter was actively engaged at her profession in Detroit for nearly twenty-five years. About ten years ago her health began to fail and she retired from practice. She was a member of the Blackwell Medical Club, the Wayne County Medical Society and the Michigan State Medical Society. For a number of years she was connected with the Woman's Hospital and Infants' Home of Detroit. She was very active in the Detroit Women's Club. Doctor Utter was very much of a lady and a very successful practitioner of Medicine.

Doctor Edwin Lodge, manager of the Joseph Berry Estate, died in his home at Grosse Pointe Farms July 3rd, after an illness of six months. Doctor Lodge was born in Cincinnati in 1848 and came to Detroit with his father Doctor Edwin Albert Lodge in 1859. He graduated from the Detroit public schools and the University of Michigan. He also graduated from the New York College of Physicians and Surgeons and has practiced medicine in his adopted city since 1871.

In 1899 he married a daughter of the late Joseph Berry. On the death of the latter he took charge of his estate which at that time was the largest ever probated in Wayne County. He was Vice-President of Berry Bros. Varnish Co., President of the Dwight Lumber Co., Vice-President of the O. & W. Thumb Co., Vice-President

of the Charcoal Iron Co. of America, President of the Detroit Steel Barrel Co., President of the Sanilac Farm Co., and was a Director in a number of other enterprises. Until six months ago when he suffered a breakdown, he was actively engaged in the practice of Medicine.

He leaves two children, Joseph Berry and Adelaide Lodge; four brothers, Doctor Albert Lodge of Detroit, Doctor Edward Lodge of Milford, John C. Lodge, who is a member of the Council of Detroit and Edmund Lodge; and two sisters, Mrs. Emma Witherspoon and Miss Harriet Lodge of Detroit.

Doctor J. D. McEachron, of Vermontville, died at his home, June 30th, following a serious operation to which he had submitted.

Doctor McEachron was President of the Eaton County Medical Society and had practiced in Vermontville many years. He is survived by the widow and two children.

State News Notes

For Sale, house with office attached, barn and garage. Value \$5,000. No better country and small village practice anywhere in the State, ten grade school, electric lights, two churches, etc., in village of Orleans, Ionia County. Reason for selling, moving out of State. Price \$3,000, half down, balance mortgage at 6%. Write Journal for further particulars.

For Sale—Bay City, Michigan. Eye, ear, nose and throat practice and office equipment. Mrs. H. Beach Morse, 1602 9th St., Bay City, Mich.

CHIROPRACTORS CONVICTED.

Two so-called chiropractors practicing the cult at Ishpeming and Marquette were convicted at the May term of the Circuit Court of Marquette County of practicing medicine without being registered under the State Medical Act.

Both defendants admitted on the witness stand that they had attended persons in their offices who had complained of various diseases or ailments, including tuberculosis, cancer, paralysis, and arteriosclerosis, by "analyzing" the spinal column and "adjusting" or replacing "subluxated vertebrae." Upon cross examination, both defendants admitted that they had found "subluxated" or displaced vertebrae in every case attended, and that they had determined these facts by "analyzing" the spine and had "adjusted the

defects" found by hand or "chiropractic thrusts." Both defendants admitted that they had no technical or practical knowledge of disease, that they did not diagnose or attempt to cure diseases or ailments, that they simply "analyzed the spine and adjusted or connected subluxated or displaced vertebrai, relieving pressure of the spinal nerves, and by so doing released the vital forces of the brain, and in consequence nature effected the cure."

The Judge in taking the cases from the jury and directing a verdict of guilty, stated that the defendants had testified to their own guilt by admitting that they had "analyzed" the spine and had attempted to, or had "adjusted" a defect, real or supposed, that "diagnosis" and "analysis" were synonymous terms, and had in view the determination of a condition either real or supposed, and that an "adjustment" was synonymous with "treatment." He characterized the attempted defense through the misuse of terms of speech as silly and an insult to the intelligence of the court, and stated that the Michigan Medical Acts, as interpreted by the Supreme Court were all sufficient to protect the people from unqualified practitioners.

He could see no difference in relation to the practice of medicine between a misplaced vertebra and a misplaced bone of shoulder, elbow or knee. Their treatment involved surgery.

These chiropractic defendants were defended by special out-of-state attorneys employed by a national state or national chiropractic society, who encourage these fakers to invade the several states, and promise to defend them if prosecuted, and to pay their fines if convicted.

As usual, the attorneys for the defense threatened to carry these cases to the Supreme Court for reversal on legal points, but as the court has already held the Medical Act sufficient involving similar cases, there exists no doubt as to the final result if the cases are appealed, which is very doubtful.

The Judge in these cases (who by the way the late Colonel Roosevelt characterized as possessing one of the greatest legal minds in the country) was most emphatic in his opinion that the Medical Act was all sufficient to prevent such a fraud as chiropractic from being practiced in Michigan without license from the state.

The Woman's Hospital and Infants' Home of Detroit has recently purchased the entire block bounded by Brush, Beaubien, Forest and Hancock Sts., with the exception of a small piece owned by the Visiting Nurses Association. This

hospital which now has 100 beds, will eventually have 1,000 beds. It will not be possible to build all of the proposed additions at once. Plans are now being considered for an addition of a 400 bed unit. This will be built without disturbing the present hospital which will be left standing and will eventually be turned into an administration building. Additional units will be constructed as fast as the money can be raised. The physicians on the building committee are Doctors C. H. Judd, Walter Manton, James E. Davis and Florence Chadwick.

A chiropractor recently pleaded guilty in Battle Creek of advertising contrary to law, and was given a suspended sentence by Judge North, conditionally, upon ceasing advertising in the future.

As he had contracted with a local play house for screen advertising for a year at \$10.00 per week, and as the contract had only run some two weeks, he was forced to pay something like \$500.00 "without hope of reward" in the form of an office full of unsuspecting, confiding and weary waiting patients.

Doctor Fred M. Meader has been appointed Medical Director of the Detroit Board of Health succeeding Doctor Don M. Griswold who has accepted the Chair of Public Health and Hygiene at the Iowa State University. Doctor Meader was formerly Bacteriologist for the City of Syracuse, N. Y., and Director of Communicable Diseases for the New York State Department of Health. Before coming to Detroit the Doctor was on the teaching staff of the School of Hygiene of Johns Hopkins University.

A fresh air camp for children has been established at the Municipal Tuberculosis Sanatorium Farm near Northville, Michigan, under the direct supervision of the Detroit Board of Health. The Detroit City Council has appropriated \$10,000 for the construction and maintenance of the camp. Fifty tents have been erected which accommodate 100 children, the girls and boys being housed in separate groups. Captain Nicholas M. Kraemer is camp supervisor and head of the commissary department.

At their July meeting the Regents of the University of Michigan accepted with regret the resignation of Doctor W. B. Hinsdale, Dean of the Homeopathic Medical School for the past 25 years. During all these years Doctor Hins-

dale has been Professor of the Theory and Practice of Medicine. He is also Director of the Homeopathic Hospital. His resignation is to become effective as soon as his successor is appointed.

Dr. G. M. Byington, member of U. S. P. H. S. and associated with the Michigan Department of Health during the past two years, returns to private practice. Recently the Doctor has spent considerable time at Northwestern University, and expects to limit his practice to Diagnosis and Diseases of Children. Doctor Byington will have offices in the Bauch Building, 115 W. Allegan St., Lansing, Mich.

Doctor Walter L. Mendenhall, formerly Professor of Physiology in the University of Southern California, has been appointed Professor and Director of the Department of Physiology and Bio-Chemistry in the Detroit College of Medicine and Surgery.

Doctor W. H. MacCraken, Dean of the Detroit College of Medicine and Surgery, spent the month of July inspecting and studying the organization of some of the principle medical schools in the East.

Students registering in the Detroit College of Medicine and Surgery after July 1, 1919, are required to complete five years of work including an internship in an approved hospital before the Degree of Doctor of Medicine is conferred.

Doctor Fred C. Warnshuis has recently been appointed Chief of Staff in Butterworth Hospital, Grand Rapids.

Doctor and Mrs. Frank Kelley of Detroit spent the month of August at Bigwin Inn, Lake of Bays, Ontario.

Mrs. Nathan Jenks of Detroit has recently presented to the Library of Wayne County Medical Society about five hundred volumes which formerly belonged to Doctors E. W. and Nathan Jenks and Colonel Perley.

Doctor Justin E. Emerson, for many years one of Detroit's best known Alienists, is spending his summer at the Soo. His winter home is Saint Petersburg, Florida.

Surgeon-General Merritt W. Ireland, U. S. Army had the degree of Master of Arts conferred on him by the University of Michigan, June 24, 1920.

Doctor and Mrs. A. Thuner and daughter have sold their home on Chicago Boulevard, Detroit, and will spend the coming winter in San Diego, Cal.

Doctor John Sherrick has been appointed Assistant Professor of Gynecology and Obstetrics in the Medical School at Ann Arbor. He succeeds Doctor Leslie Botsford, resigned.

Dr. Angus McLean read a paper on the 25th Anniversary of the Lambton County Medical Society held in Sarina, July 14th.

Mrs. H. R. Varney has opened her cottage at the LeCheneaux Club. Doctor Varney will join her in August.

Doctor and Mrs. E. W. Haass are spending their summer holidays at Bretton Woods, N. H.

Doctor and Mrs. J. W. Vaughan and family will spend their vacation at their cottage in Old Mission.

Dr. E. W. Tonkin and Miss Florence B. Hicks of Edwardsburg were married on June 24.

Dr. Ralph B. Snyder of Lansing has located in Augusta.

Doctor Sam C. Gurney, formerly of Detroit, has located at 3768 Sixth St., San Diego, Cal.

Dr. John H. Davis has located in Ithaca.

Dr. Carelton Fox has located in Bessemer.

COUNTY SOCIETY NEWS

It is the Editor's desire to have this department of the Journal contain the report of every meeting that is held by a Local Society. Secretaries are urged to send in these reports promptly

DICKINSON-IRON COUNTY

The regular monthly meeting of the Dickinson-Iron County Medical Society was held at the Country Club, Iron Mountain, Michigan, on July 7, 1920, with the president, Dr. W. J. Anderson, presiding.

After disposing of the regular business Dr. Anderson presented a paper on "Cysts of the Maxillae" which proved most instructive to all present. The doctor had lantern slides to illustrate the more important points of his paper. Following the paper a social session was held.

Members, can you afford to miss things of this character? Think the matter over carefully.

The next regular meeting will be held in Crystal Falls on August 4th. This is the regular meeting for election of officers. Questions that are vital to the future success of our society will be discussed at this meeting and we want every doctor in Dickinson and Iron counties present.

Dr. Boyce and Dr. Bovik will present papers at the August meeting; Dr. Walker and Dr. Darling will present papers at the September meeting and Dr. Holmboe at the October meeting. We meet the first Wednesday in each month and notices are sent in plenty of time for you to arrange your work so you may be present. Come just once and you will never miss again.

L. E. Bovik, Secretary.

GENESEE COUNTY

The Genesee County Medical Society met at the Michigan Home and Training School, Lapeer, on Wednesday, June 23rd. Dr. H. A. Haynes entertained at luncheon, and with his staff, took the members on a tour of inspection of the Home. The methods of grouping the patients was explained and the methods of treatment by occupational therapy and vocational training were shown. As there are 1638 patients cared for in this splendid institution, our members got a good insight into modern methods for the care of the feeble-minded. Following this inspection, the doctors assembled in the auditorium where a clinic on Endocrinology was given by Dr. T. A. McGraw of Detroit. He presented the following cases and spoke on the diagnosis, pathology and treatment: Acromegaly, Gigantism, Hypophyseal Dystrophia Adiposogenitalis, Hypopituitarism

without Obesity, Infantilism of the Lorain Type, Infantilism of the Brissaud Type, Cretinism, and a case of Multiglandular Syndrome. Dr. W. Clift presented the X-ray findings of these cases. Dr. B. E. Biggs showed several pathological specimens. The doctors present were unanimous in the opinion that this was one of the most interesting and profitable afternoons which they had ever spent.

W. H. Marshall, Secretary.

GRATIOT-ISABELLA-CLARE COUNTY

The June meeting of the Gratiot-Isabella-Clare County Medical Society was held in Brainerd Hospital, June 24. Dr. Herbert C. Rich, of Detroit, read an excellent paper on Bronchial Asthma, afterwards using patients to illustrate the different points of his subject.

The attendance was good, the Clinic was good. Altogether it was a very profitable meeting.

E. M. Highfield, Secretary.

MICHIGAN TRUDEAU SOCIETY.

Spring Meeting, Ann Arbor, May 24th, 1920.

The following program was carried out:

1. When does Tuberculosis Become Reportable?
Dr. A. B. Wickham, Detroit.
2. Tonsillar Route of Infection in Pulmonary Tuberculosis.
Dr. J. G. Van Zwaluwenburg,
Dr. G. P. Grabfield,
Dr. Mark Marshall,
Dr. A. C. Furstenberg,
Ann Arbor.
3. The Framingham Diagnostic Standards for Tuberculosis in Children.
Dr. Willard B. Howes, Detroit.
4. Calcification of the Pleura.
Dr. P. M. Hickey, Detroit.
5. Paper—Gross Pathological Course of Lobar Pneumonia with cause of Bronchial Breathing (X-ray Demonstration).
Dr. A. H. Garvin, Detroit.
6. Post-Influenzal Pleurisy with Effusion,
Dr. G. H. Ramsey, Detroit.

(1) Dr. Wickham, who is connected with the Detroit Health Department Tuberculosis Clinics, gave some interesting figures in regard to the

reporting of cases by physicians, stage of disease, etc. He maintained that the physician should not wait for a positive sputum but report every case in which he has satisfied himself of the diagnosis. Many cases have intervals with no tubercular bacilli in sputum. He thought recovered cases should have their names removed from the official list when they have been bacilli free and without symptoms for two years.

(2) This symposium represented an attempt to connect pulmonary disease with tonsil disease and was participated in by the Roentgenological, medical and laryngological departments of the University Medical School. Dr. Van Zwaluwenburg showed many chest plates with a hitherto undescribed marking which he terms a "pleural cap." This was found in connection with chronic tonsillar disease and was so characteristic that from its presence the X-ray diagnostician has been able to direct attention to hitherto unnoticed diseased tonsils.

Dr. Grabfield analyzed the chest plates taken at the University Hospital during several months showing apparent connection between lung and tonsil pathology.

Dr. Mark Marshall discussed the same question from the internist's viewpoint and Dr. Furstenberg from the point of the throat operator. Dr. P. M. Hickey opened the discussion.

(3) Dr. W. B. Howes, who was at one time in charge of the examination of children at the Framingham Experiment, distributed copies of the Diagnostic Standards, published by the National Tuberculosis Society and discussed the various headings. He emphasized the importance of the history of exposure, increased mediastinal density, and the tuberculin reaction. The discussion was opened by Dr. C. H. Johnston who dwelt on the practical difficulties found clinically, especially in glandular and meningeal diseases in children. He said that in the presence of septic tonsils and adenoids it was often very difficult to be certain whether tuberculosis were present or not.

(4) Dr. P. M. Hickey read the history of a case of calcification of the pleura and exhibited X-ray plates of this rare condition. It seems to be produced as a result of chronic suppurative condition of the pleura.

(5-6) Dr. A. H. Garvin and Dr. G. H. Ramsey showed a large number of X-ray plates made at

Herman Keifer Hospital during the recent influenza epidemic in Detroit. These were serial plates of lung conditions and revealed many interesting facts. Patients who were convalescent from influenza feeling well enough to wish to go home, were found by X-ray to have traces of broncho-pneumonia. Later these same patients had their initial chill of pneumonia and pursued the usual course. The sign of bronchial breathing in these cases was found to depend upon the fact that the pulmonary consolidation reached to a bronchus. There has been a wide belief that the pneumonia without bronchial breathing was central and that bronchial breathing was heard when the area of consolidation extended to the lung periphery. This was shown to be erroneous. Signs of consolidation at the periphery were not accompanied by bronchial breathing unless a bronchus was involved.

Dr. Ramsey from plates taken at the same time showed the extreme frequency with which encysted pleural fluids accompanied these pneumonias, also the extreme rapidity with which they came. He showed that when high and lateral they pushed the mediastinum to the opposite side and by pressure caused sudden death. These areas of fluid can be detected over consolidated areas by physical signs but only by most careful examination. When marked dyspnea arises, such fluid should be sought for and removed at once. Such a procedure may be life saving.

(7) Dr. Hugh Cabot spoke on the etiology and prognosis of tuberculosis of the kidneys. He said it was always secondary to other pulmonary disease in the body. The early diagnosis was often quite impossible. Symptoms were usually mostly from bladder or epididymis. There were on record no proven cases of healing of a tuberculous kidney. Zephrectomy either by nature or art was always the result. Surgical removal usually was preferable but should never be undertaken until a functioning kidney on the other side had been demonstrated. He gave figures concerning immediate and late mortality in these cases.

The following officers were elected for the ensuing year:

President—Dr. J. B. Jackson, Kalamazoo.

Vice-President—Dr. J. G. Van Zwaluwenburg, Ann Arbor.

Secretary—Treasurer—Dr. Herbert M. Rich, Detroit.

SANILAC COUNTY

The quarterly meeting of Sanilac County Medical Society was held in the Community House, Croswell, on Tuesday, July 6th, 1920, at 1:30 p. m. Doctor C. G. Robertson, was appointed chairman in the absence of the President, Doctor J. E. Campbell. The minutes of the previous meeting were read and approved. A paper was read by Doctor Albert M. Crane, Department of Diagnosis, Jones Clinic, Bay City, on "The Comparative Value of Clinical Histories, Physical Findings and Routine Wassermann Tests in the Diagnosis of Obscure Syphilis with Report of Cases." The paper was very instructive and was much appreciated by the members present, who participated in general discussion. A paper was also read by Doctor R. R. Reed, Chief of the Dental Department, Jones Clinic, Bay City, on "Focal Infection of Teeth and its Application to the Practice of Medicine, with Lantern slide illustrations, which was very interesting and much appreciated. The Secretary read a communication from the State Medical Society re a membership drive for the purpose of securing every eligible physician in the county to become a member of his County Society, and that a committee be appointed for that purpose. A membership committee was created and the following were appointed to serve on that committee:

Doctor J. E. Campbell, Brown City.

Doctor J. C. Webster, Marlette.

Doctor J. W. Scott, Sandusky.

Votes of thanks were tendered Doctors Crance and Reed for their courtesies including an apology for the small attendance at this meeting. The matter of Compulsory Health Insurance was brought before the meeting and after discussion a unanimous vote was taken against the measure.

A delightful ice cream and cake lunch was served by the local Doctors.

J. W. Scott, Secretary.

Book Reviews

GENERAL AND DENTAL PATHOLOGY. Julio Endelman, M.S., D.D.S. and A. F. Wagner, A.M., M.D. Profusely illustrated. Price \$7.00. C. V. Mosby Co., St. Louis, Mo.

The subject of dental pathology and its manifestation in constitutional invasion is of foremost

importance. Until one pursues the subject, follows up the individual case, and observes the influence exercised by pathological disease of the teeth, the importance of the subject does not become apparent.

In this text we have a full discussion of the subject. It contains that information which every doctor must acquire and apply. It is a text that commends itself on sight.

We urge most sincerely that it be secured by every reader. No doctor can be without it and be abreast of the times. Certainly he who ignores this subject is sure to be unsuccessful in his practice. We know of no other work so complete, so practical and so instructive upon the subject of dental pathology. We recommend it most heartily.

SIMPLIFIED INFANT FEEDING, WITH EIGHT ILLUSTRATIVE CASES. By Roger H. Dennet, B.S., M.D., Second Edition. J. B. Lippincott Co., Philadelphia.

A practical aid to every person who is called upon to direct the feeding of an infant. A text that should be welcomed by the pediatrician.

DISEASES OF WOMEN. Charles M. Green, M.D., Harvard Medical School. Cloth. W. M. Leonard, Publisher, Boston.

This is a discussion of diseases of women based upon 173 case histories incorporated in the text. As such it is a practical clinical presentation of features that are typical or different types. It is of more than passing interest but not extraordinary in its scope.

PRINCIPLES OF HUMAN PHYSIOLOGY. Earnest H. Starling. Third Edition. Cloth, 579 illustrations. Price \$6.00. Lea & Febiger, Philadelphia.

A standard, recognized text, modern, imparting recent advancement. Such is the summary of this text and imparts in concise form its value. We believe the work is so well known that further comment is not required.

ARTERIOSCLEROSIS AND HYPERTENSION, with Chapters on Blood Pressure. Louis M. Warfield, A.B., M.D. Cloth. Price \$4.00. C. V. Mosby Co., St. Louis, Mo.

Third Edition, as such it is brought up to date. An able, practical and scientific discussion of the subject.

PATHOGENIC MICROORGANISMS. A practical manual for students, physicians and health officers. William H. Park, M.D., Anna W. Williams, M.D., Charles Krumwiede, M.D. Eighth Edition, Enlarged revised. Cloth, \$6.00. Lea & Febiger, Philadelphia.

A very thorough and complete text covering its subject fully and modernly. Its value is demonstrated by the demand for an eighth edition. One finds a discussion of the entire field of pathogenic organisms.

Certainly the authors merit commendation for their scientific effort and the profession is fortunate in being able to secure such a reliable text.

THE TREATMENT OF WOUNDS OF LUNG AND PLEURA. Engenio Morelli. Translated by Linolen Davis and Frederick Irving, U. S. Army. W. M. Leonard, Publisher, Boston.

This is a splendid translation of this Italian Surgeon's experience during the war and imparted in this text. It gives us the Italian technic of dealing with these types of wounds. However, it cannot be credited as imparting the last word, nor is it equal to the A. E. F. Medical Corp. Methods and operative procedure. Still, it enables one to view the subject from a different angle and so is a worth while contribution meriting one's consideration.

SYMPTOMS IN THE DIAGNOSIS OF DISEASE. Hobart Amory Hare, M.D., B.Sc. Eighth Edition. Cloth. Price \$6.00. Lea & Febiger, Philadelphia.

Nothing further need be said than that this revision of a well known work continues its value. It is a text that should be at the right hand of every student and practitioner. We commend it most highly.

REGIONAL ANESTHESIA. B. Sherwood-Dunn, M.D. Cloth, Price \$3.50. F. A. Davis Co., Philadelphia.

A splendid guide, and descriptive technic of local anesthesia. One that should be possessed by every surgeon.

PRINCIPLES AND PRACTICES OF INFANT FEEDING. Julius H. Hess, M.D. Second Edition. Cloth, Price \$2.50. F. A. Davis Co., Philadelphia.

A work that will always be of material assistance in solving the problems of selecting proper diets for artificial feeding of infants.

LABORATORY MANUAL OF PHYSIOLOGICAL CHEMISTRY. Elbert W. Rockwood, M.D., Ph.D. Fourth Edition, illustrated. Price \$2.00. F. A. Davis Co., Philadelphia.

A modern manual of laboratory methods. A reliable guide in laboratory work.

A MANUAL OF PHYSICAL DIAGNOSIS. Austin Flint, M.D., L.L.D., Revised by Henry C. Thacher, M.S., M.D. Cloth, 360 pp. Price \$3.00. Lea & Febiger, Philadelphia.

This is the eighth edition of this manual. It includes in its revision the recent advances in the laboratory side of diagnosis. Splendid in detail it aids in the attainment of greater skill and the making of more reliable diagnosis which is being demanded to-day.

DERMATOLOGY. J. Darier, Edited with Notes by S. Pollitzer of New York. Illustrated freely, 204 engravings. Cloth, 765 pp. Price \$8.50. Lea & Febiger, Philadelphia.

This work at once assumes a place alongside our authoritative texts. French dermatologists have long maintained a leading role in dermatology. This text from a master is a valuable one. Clear and concise in text as also treatment, well placed illustrations and modern in theory, we are pleased with the entire volume. It is entitled to a most cordial reception.

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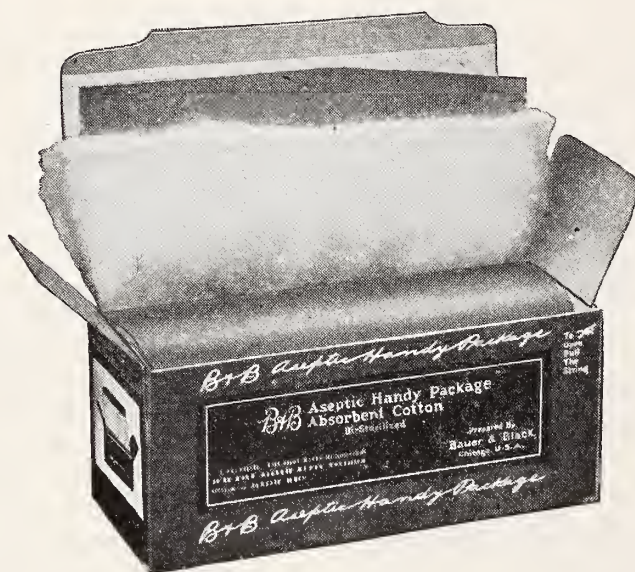
medicinal agent, and among other things we directed it to the attention of the British Medical Association at a meeting held in Cork, Ireland, in 1879.

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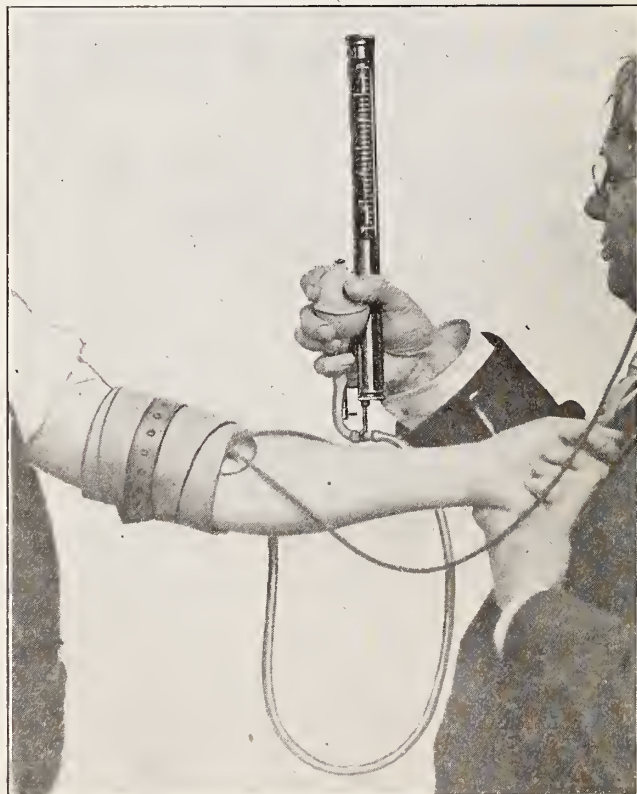
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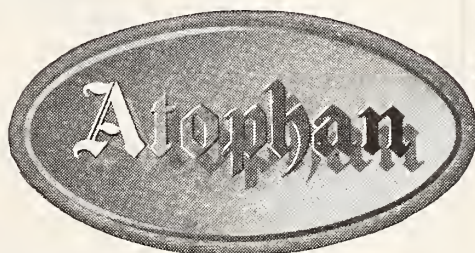
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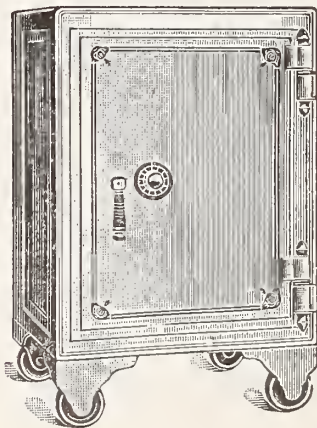
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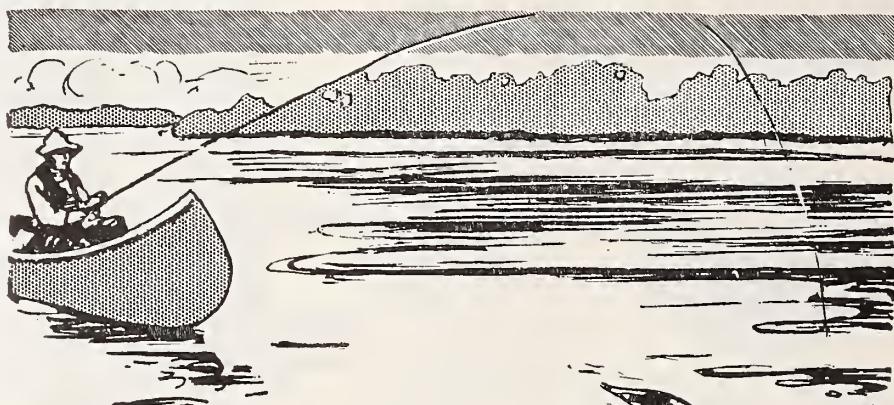
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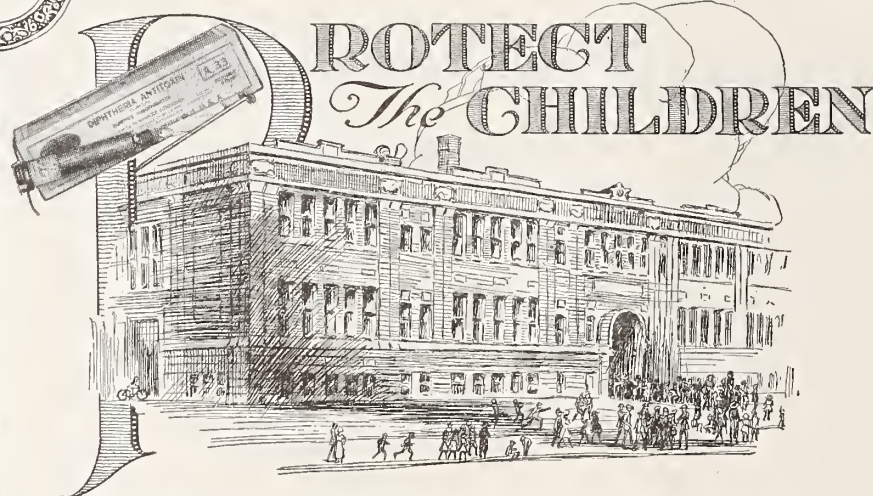
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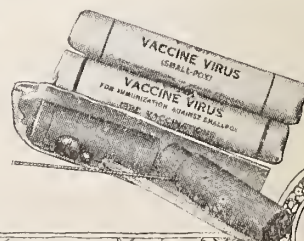
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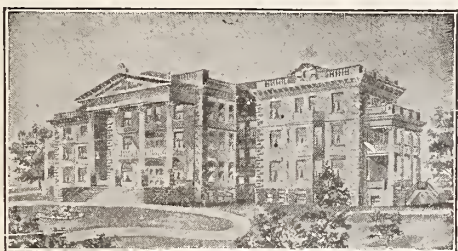
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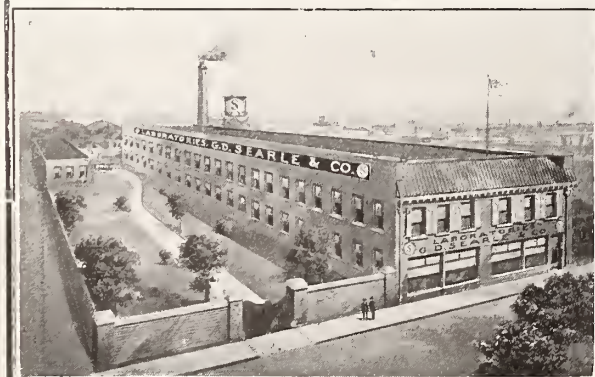


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See this space in October number.

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Original Articles

GLYCOSURIA DURING PREGNANCY.*

ROLAND S. CRON, B.S., M.D.

ANN ARBOR, MICH.

J. Mathews Duncan was probably one of the first to correctly interpret the findings of glucose in the urine during pregnancy. In a paper on puerperal diabetes read before the London Obstetrical Society, he reported 22 pregnancies occurring in 16 women who had become pregnant while suffering from diabetes or had developed the disease while pregnant. Eleven, or 68 per cent. of these women died within the following two years as a result of the disease, while 47 per cent. of the children were lost. Offergeld in his monograph of 1913 reports 63 such cases with an estimated maternal mortality of 50 per cent. and a minimum fetal mortality of 66 per cent., 56 per cent. being still births and another 10 per cent. dying during the first few days of life. Joslin, however, in a recent paper has taken a much more optimistic view of the complication, although both his maternal and fetal deaths in the moderate and severe cases approach these of Duncan and Offergeld. From these statistics and those of the state of Massachusetts, which show that the frequency of diabetes has more than doubled within the past ten years, it can be seen that the disease is an important one to recognize.

In a review of 2,200 consecutive cases of the Obstetrical department at the University Hospital, where the patient's urine is examined at least once every week, I have been able to find cases of lactosuria and almost every type of glycosuria. Only the urines in which there was a definite reduction of Fehling's solution was sugar recorded by the examiner as being present. Of these 2,200 cases 88 gave a test for some form of sugar during either pregnancy, labor or the puerperium.

I now wish to present from the records of the University Hospital two typical cases of diabetes mellitus and a number of conditions which may be confused with true diabetes.

Case (O. B. No. 338). The first is the case of a patient with lactosuria, who four weeks before labor and six days postpartum gave repeated tests for sugar in her urine. This was definitely proven to be due to milk sugar.

Lactosuria. There is no doubt that a certain percentage of all pregnant and puerperal women have some form of sugar in the urine. This in most cases is in the form of lactose, or milk sugar, and is due to a premature activity or engorgement of the breasts. It can be found most frequently during the puerperium when the breasts are engorged or during the weaning period, but may be present as early as the sixth month of pregnancy. In none of these uncomplicated cases has Schiller been able to demonstrate any increase in the blood sugar.

Case 2 (O. B. No. 44). The next is a case of alimentary glycosuria in a young girl, aged 20, who was in the habit of eating considerable quantities of candy. Her urine repeatedly reduced Fehling's and gave the fermentation reaction. With a restriction of the carbohydrates the urine became sugar free and remained so throughout the pregnancy and puerperium.

Alimentary Glycosuria. It is a well recognized fact that the pregnant woman is less tolerant to carbohydrates than the non-pregnant woman. As has been demonstrated in this case by simply removing the excess of carbohydrate intake the sugar in the urine disappeared and remained absent following delivery. Norris has shown that in pregnant women there is a certain susceptibility to alimentary glycosuria, so that an ingestion of 60 grams of glucose will produce a glycosuria.

Case 3 (O. B. No. 1163). Renal Diabetes. The next case is that of a primipara, aged 35, who gave a history of nephritis with hypertension and angiosclerosis of the retinal vessels. Her urine reacted for glucose two weeks before delivery and her blood sugar repeatedly was found .158 per cent., the upper limit of normal. She

*Read before Section on Gynecology and Obstetrics, M.S.M.S., Annual Meeting, May, 1920, Kalamazoo, Mich.

had at this time 2 grams of albumen per liter of urine and a blood urea of .0384 grams. Her sugar excretion was uninfluenced by diet. The labor was uneventful except that she was delivered of a macerated fetus with an accompanying infarcted placenta.

Renal Diabetes was diagnosed in this case because the blood sugar was always within the limits of normal, and her glycosuria uninfluenced by either increasing or decreasing the carbohydrate intake. The most recent work by Foster and Mann on the sugar content of the blood in these renal diabetics has proven that there is not a hyperglycemia present. It is peculiarly characteristic of pregnancy and may be due to a hypersensitiveness of the kidney to glucose or the result of a phloridzin-like substance. There may be a recurrence during successive pregnancies and occasionally the glycosuria may alternate or be combined as in the case with albuminuria.

Case 4 (O. B. No. 2144). This case is that of a patient with diabetes mellitus due to a syphilitic pancreatitis. She is a primipara, aged 19, who became pregnant in July, 1919. She entered the Maternity clinic February 7, 1920, with a diagnosis of lues and diabetes mellitus, present since December, 1919. A physical and laboratory examination corroborated the diagnosis of syphilis. A general adenitis, pigmented scars on the right labium and a positive Wassermann were found. The uterus was enlarged to the size of a six months' pregnancy and the fetal heart was heard. Chronic gonorrhea was also demonstrated.

The glycosuria and blood sugar had a tendency to drop simultaneously with the lowering of the carbohydrate intake and arsphenamine injections.

On February 2, she was delivered of a seven months' stillborn fetus which had died during labor. At this time she presented the only signs of acidosis but without any glycosuria or hyperglycemia. During the first two weeks of the puerperium the diet was unrestricted, consequently sugar appeared in the urine of the fifteenth day postpartum and the blood sugar ascended to .135 per cent. With a resumption of a low carbohydrate diet and antiluetic treatment both sugar findings returned to normal.

During the puerperium she developed a pelvic and general peritonitis, which localized as a tubo-ovarian abscess. This ruptured five weeks postpartum and eighteen hours later she died with the symptoms of peritonitis rather than those of diabetic coma.

Diabetes Mellitus and Syphilis. The premature labor with a stillborn fetus may have been due to both diabetes and the syphilis. Since the placenta showed no positive signs of syphilis, and although the liquor amni contained no sugar, and there was no hyperglycemia of

the fetus, nevertheless, the type of labor with a living fetus just prior to delivery suggests that the fetal death was due to diabetes.

Certainly the indications in this case were to control the diabetes by two definite lines of treatment; namely, dietary and antiluetic. The tolerance to carbohydrates being raised by the former, and the syphilitic involvement of the pancreas being limited but not necessarily repaired by the latter. The elevation of the final blood sugar can be explained by the general peritonitis and exhausted condition of the patient just before death.

In reviewing this history one might think that the puerperal fever in this case was definitely related to the ideal culture-media afforded by the glucose in the blood. Such is doubtful and can be better explained by an exacerbation of the old chronic gonorrhea from which she suffered earlier in pregnancy.

The next two cases are those of diabetes mellitus.

Case 5 (O. B. No. 1031). The first is that of a mild type in a multipara, aged 30, who was admitted to the clinic October 4, 1914. For three years she occasionally had a small amount of sugar in the urine. On admission to the clinic, examination showed that the fetus was living and that she was in her last month of pregnancy. There was a moderate edema of her ankles. The urine was examined and both albumin and glucose were demonstrated. The former disappeared the following day and did not reappear until the day of labor. The specific gravity was found to be 1054, sugar 136 grams per liter or 17 per cent. per 24 hours with acetone ++ and diacetic ++. The tolerance to carbohydrates was then determined by placing the patient first on a van Noorden diet, then adding bread, until it was found that she could utilize 200 grams per day without excreting sugar in the urine. As a result the specific gravity descended, the sugar and diacetic acid disappeared in five days, so that, the only abnormality in the urine at the time of labor was a trace of acetone.

On October 29th she was delivered of a full-term living child. Two weeks later she was discharged having gone through a normal puerperium.

During the following five years she dieted moderately, and in April 1919, she again became pregnant with the reappearance of sugar in the urine and symptoms of a severe acidosis. The same treatment which had been so successfully used in the clinic in 1914 was instituted, but no improvement was noted. A curettage was then performed, but suddenly on the eleventh day postpartum she died in diabetic coma.

Case 6 (Gyn. No. 11093). This is a type of severe diabetes in a multipara, aged 40, who entered the department of Obstetrics and Gynecology January 1, 1920. In the personal history

there are a few things to be noted. In 1916, she had a generalized edema of the body followed by polydipsia, polyphagia, polyuria, nocturia and excessive foul sweating. At this time her physician diagnosed diabetes and placed her on a modified carbohydrate free diet.

According to her history she should have been entering her eighth month of gestation. A physical and pelvic examination showed the fundus of the uterus extending three fingerbreadths above the umbilicus. The fetal parts and movements could be made out, but the fetal heart was not heard.

A urine examination gave a specific gravity of 1030, acid reaction with a very high percentage of glucose and acetone but no diacetic acid or albumin. She was immediately placed on a modified green diet which contained 11 grams of carbohydrate, 90 grams of fat and 17 grams of protein, giving her 1050 calories per day. On this diet, within four days the sugar disappeared from the urine, leaving, however, very heavy tests for both acetone and diacetic acid. At this time the blood sugar was .15 per cent. She became very restless and began to vomit. Albumin water was then administered for the following three days but the vomiting did not stop, so rectal feedings of sodium bicarbonate, glucose and water every two hours, were started. The urine showed no change, the blood sugar remained within the limits of normal and on the tenth day her condition was decidedly worse. She expelled most of the rectal feedings. Albumin, hyalin and granular casts were found in the urine. Albumin water was again started by mouth. It contained 80 grams of carbohydrate in the 22 ounces administered during the 24 hours. Her tolerance for sugar evidently was greatly reduced, for the urine quickly showed a heavy precipitate with Fehlin's and acetone and diacetic were present. On the 12th food by mouth was retained as a result of receiving 217 grams of carbohydrate. This was followed by a striking improvement in her general condition, for on the following day only a trace of acetone and diacetic acid remained in the urine. On the 14th day there was no change.

The following day at 7:30 a. m. she went into labor and at 8:40 a. m. was delivered of a premature, slightly macerated, stillborn fetus by the mechanism of persistent occiput posterior, followed immediately by a prematurely separated placenta. The blood sugar of both mother and fetus were enormously elevated, and the urine contained a large amount of sugar but no diacetic acid or acetone.

Following the delivery the patient's condition seemed to improve, but during that afternoon she passed into coma and at 8:15 p. m. of the day of labor died with all the symptoms of diabetic coma.

DIABETES MELLITUS.

By almost all authorities, the complication of pregnancy in diabetes is considered much more serious than the appearance of diabetes

in pregnancy. In the three of the four cases gathered from the records of the University Hospital, the diabetes antedated the period of conception. As was shown in the last reported that of pregnancy occurring in severe diabetes of four years' standing, the outcome for both mother and fetus was most disastrous. Again, after reviewing the case preceding the last, where the diabetes although very mild antedated the pregnancy, the patient, when placed on a proper diet, went through a normal pregnancy and puerperium and was delivered of a full term living fetus. Five years later, while only two months pregnant, she succumbed to a diabetic coma.

In reviewing the blood sugar determination on the cases reported one is struck by the marked variability. The reports ranged from those within the limits of normal to the enormous figure of .8 per cent. In the case of diabetes, syphilis and pregnancy the blood sugar when the patient was placed on a non-restricted diet was found to be .28 per cent. When the diet was restricted the hyperglycemia immediately fell to .21 per cent. and with the advent of antiluetic treatment and following labor a further reduction to within the limits of normal was noted. When the complication of general peritonitis developed, the blood sugar rose to .402 per cent. The last case, that of a marked diabetic, is interesting because of the fact that throughout the entire pregnancy the blood sugar remained within the upper limits of normal; but as soon as glucose was administered, the sugar preceding the onset of the coma reached the high point of .8 per cent.

Acidosis in these cases is indicated by the presence of acetone and diacetic acid in the urine as well as by the symptoms of nausea and vomiting, restlessness, irritability, rapid pulse, Kussmaul breathing and by the amount of sodium bicarbonate necessary to bring about the excretion of an alkaline urine. Acetone and usually diacetic acid can be found, whenever there is an appreciable amount of mellituria, and frequently, while the patient is on a starvation diet even after the mellituria has disappeared. Most commonly acidosis is the result of a diet high in fats, even though the carbohydrates have been reduced to a minimum. Whether the acidosis in the last case reported was due to the Van Noorden and later starvation diet, or whether it was the result of a high fat intake, is a debatable point. But I heartily agree with Joslin, Strouse, Bloor and Tice, that the most important factor in the production of acidosis is fat and secondarily carbohydrates. Hence, in the treatment of these cases the fats

should be reduced to a minimum or entirely eliminated if necessary, and the carbohydrates reduced to the point of tolerance.

Nowhere in the literature have I been able to find even a consideration of the possibility of the production of a nephritis, or exacerbation of a latent nephritis, by the feeding of such a relatively high protein diet as is indicated in the treatment of diabetes. Newburgh has shown conclusively that in animals an acute nephritis can be brought on by continuously feeding a high protein diet. The same may be true in man. At least, it is within the range of possibilities. In pregnant women we know that the most common complication is albuminuria. In practically all cases this is the result of a renal destruction due to either one of the toxemias of pregnancy, or a true nephritis. It is interesting to note that in the four cases of diabetes complicating pregnancy gathered from the records of the University Hospital, in all, there were signs and symptoms of renal impairment and in the two which came to autopsy reports of some renal pathology. Why then is not diabetes and nephritis during pregnancy even more of a serious complication than is usually realized? Here we have two diseases which require absolutely different dietary treatment. The one requires a diet low in carbohydrates and fats, while the other should have a minimum of protein.

During the pregnancy the patient should be constantly under the supervision of the attending physician, and on first consultation should be treated in accordance with one of the methods outlined by Joslin, Allen, Strouse, Beattie or Woldert. These consist either immediately placing the patient on a starvation diet as advocated by the Allen school, or instead, in using the more conservative gradual reduction of fats, proteins and carbohydrates as advised by the others. In the milder cases, as in case 5, the omission of fats, bread and sugar will usually free the urine of glucose. Then within a few weeks a tolerance of 125-150 grams of carbohydrate can be secured, after which, provided the urine remains sugar free, protein and fat sufficient to retain the normal weight of the patient can be added. These cases will usually go through an otherwise normal pregnancy and puerperium.

It is the more severe cases, such as case 6, which ought to be considered in greater detail, since the treatment in these cases is more difficult. Here the usual medical treatment combined with surgical interference if necessary must be employed. Such interference depends upon the viability of the child and also the re-

sponse of the disease to medical treatment. In every case the following treatment should be observed before any other interference is considered; immediate omission of fats, gradual reduction and final omission of protein, followed by continued reduction of carbohydrates with fasting eventually if necessary. In a gradual reduction such as this, one is much less liable to coma. The urine having become sugar free, the tolerance for carbohydrates is then determined by gradually increasing the latter, until a point is reached just below that at which sugar is excreted in the urine. Next, the proteins are increased, until the patient is receiving one gram of protein per kilogram of weight, or less if the carbohydrate tolerance is low. It is advisable to start the proteins before the carbohydrate tolerance has been reached, so that the normal is approached as early as possible. Fat is to be added only after the protein tolerance has been brought up to the required amount of protein and the carbohydrate tolerance has been determined. As long as acidosis and glycosuria are present, the fat must be kept low. In every case one should attempt to feed 30 calories per kilogram of weight.

Other medical treatment of great advantage in combating the acidosis recommended especially by Sellards is alkalization by the liberal administration of sodium bicarbonate, either by mouth, rectum or intravenously. Alcohol has been used with great benefit by Allen, Foster and Van Noorden to guard against acidosis and also to make up the required calories for sustaining life.

After having employed the treatment outlined above, one must act according to the viability or non-viability of the child. Before viability, the indications sufficient to terminate pregnancy in the most conservative manner are (1) an albuminuria, (2) inability to raise the tolerance so that the patient is receiving 30 calories per kilogram of weight (3) a persistent hyperglycemia, (4) a persistent acidosis, (5) a history of aggravation of the disease during previous pregnancies. After viability, most authorities, chief among whom are Williams, De Lee, Fruhinholz and Lesse, advise waiting with the employment of medical treatment and inducing labor only when threatening symptoms such as those mentioned above, plus hydramnion and progressive weakness appear. According to these authorities labor should be brought on by rupturing the membranes, packing the cervix, introducing a balloon or bougie and then permitting the patient to deliver herself. Recently however, De Lee, Strouse, Joslin, Caldwell and Bibb have, after preparing the patient

as for a surgical operation by reducing the hyperglycemia and through alkalization, used Cesarean section to advantage. Of course this method of emptying the uterus should be considered only in those cases where there is a living child in good condition. The section should be performed under gas-oxygen anesthesia and by an experienced operator. The accompanying shock is probably no greater than that of labor and the exhaustion much less. It has the added advantage of sterilization of the mother at the time of delivery.

SUMMARY AND CONCLUSIONS.

1. A positive reaction with Fehling's solution during pregnancy does not necessarily indicate the existence of diabetes mellitus but is usually due to lactosuria or alimentary glycosuria and rarely to renal diabetes.
2. Lactosuria is common during both pregnancy and the puerperium. It is entirely physiologic and must be differentiated from the various types of glycosuria.
3. A large percentage, 30-50 per cent., of pregnant women are less tolerant to glucose than non-pregnant individuals. They have no hyperglycemia and are not true diabetics.
4. Glycosuria may be due to a lowering of the renal threshold for sugar. Albuminuria and glycosuria may accompany one another or alternate without hyperglycemia.
5. Diabetes and albuminuria may accompany one another. This complication in pregnancy is an ominous one and calls for the immediate interruption of pregnancy.
6. Diabetes and syphilis may complicate pregnancy. The treatment indicated is both dietary and antiluetic.
7. Pregnancy may occur in diabetic women or diabetes may become manifest during pregnancy. Either is a serious complication. Many patients do perfectly well but a considerable percentage die in coma, collapse or succumb to some intercurrent infection or die during successive pregnancies.
8. The fetuses of diabetics, leaving out of consideration abortions and premature deliveries, are stillborn or die within a few days following birth in about 50 per cent. of the cases.
9. Fat is the most important factor in the production of acidosis. It should be reduced to a minimum or omitted entirely. Its only use is in bringing the caloric requirement of the patient up to normal.
10. If sugar appears to a slight degree in pregnant women it should be carefully controlled by diet, and unless a carbohydrate equilibrium can be maintained, pregnancy

should be terminated. The advantages of Cesarean section under gas-oxygen should be kept in mind.

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DR. L. W. HAYNES, Detroit: The Doctor's paper is very interesting and it was particularly interesting to me to hear him recount the time that the glycosuria appeared. I have had several cases where the sugar was present when the women became pregnant, where by careful dieting I have been able to cure them. One case was particularly interesting. The patient was a primipara about twenty-five years of age and everything was normal in the urinalysis until about the seventh month, when there was a slight trace of albumin. She went into the hospital and a sample was taken which showed a slight trace of albumin but no sugar. She was delivered by low forceps the next day. Immediately after the delivery glycosuria appeared and was quite persistent and about the sixth or seventh day I called in Dr. Freund, who directed the feeding of the case. This woman carried glycosuria for about eight months following pregnancy. She became pregnant again about two-and-a-half years later and there was no sugar or albumin at any time during the second pregnancy. She began to lose some amniotic fluid about the eighth month. She was not syphilitic and there

had been no accident that might have ruptured the sac. However, she miscarried and following that developed no sugar.

One thing I would like to know is whether the Doctor has any cases that had any hydramnios following pregnancy? None of my cases had, but I see it frequently mentioned in the literature.

DR. HOLLISTER JUDD, Detroit: It does seem a little to bad to use starvation diet. I remember that in rheumatism they used to starve the people and in diabetes. I think the older practitioners used to cut the people down to starvation a great deal, but I think today we know so little about the body chemistry that it does not get us anywhere at all. There are so many physical findings and so much about the metabolism that we do not know, that it has given rise to experimenting too much with people's diet and cutting them down too much. I think we often do more harm than we do good. I remember when I was younger they used to tell us which was the dangerous thing and which was not, but now they seem to look upon it all as being not so safe as they used to think. I think it is safer to do a Cesarean section or empty the uterus in some other way for the woman who begins to show any kind of dangerous toxemia. Today the Cesarean section seems to be so easy, if you do it, it is so simple and quick, with, I think, a mortality of only 2 per cent., and it is better to empty the uterus when they begin to develop toxemias. On one occasion I did a Cesarean section for a dead baby and the mother did all right. I will not mention the details because I am sure you would think I did right, but I think we should always empty the uterus if they develop serious symptoms of toxemia.

DR. ROLAND S. CRON, Ann Arbor, (Closing): One of our cases may have had a slight or moderate hydramnios, but in the other it was not noticed. The fluid usually shows the test for sugar, and it may complicate the pregnancy even more than just the diabetes. You may get the other accompanying symptoms of malposition of the cord and all the things we do not wish to see.

I did not run across, anywhere in the literature, the complication of pentose sugar which was mentioned. In practically all of our cases it was definitely proven to be lactose or else glucose. I do not imagine the calculation of pentosuria means very much. It is very rare and I think the radical measures would not need to be carried out.

In regard to the diet, there seems to be no doubt in my mind about what should be done. The only treatment for diabetes is diet. You have to reduce the carbohydrates until you get the point of tolerance down to the point where the patient can take care of it. If you continue feeding fats and carbohydrates and the patients continue to excrete glucose you are destroying the pancreas. The most important treatment I can emphasize is in regard to the diet. Reduce the diet and treat the patient only with this interference, provided you cannot reach a carbony-

drate equilibrium. In these patients it is not necessary to do Cesarean section. One patient went through a normal pregnancy and has had no further difficulty in five years. Those that respond to medical treatment we carry along as well as we can. The advantage of doing a Cesarean section is doubtful in a good many cases, simply because the fetal mortality is so high. The most common thing is to have a patient go into labor and have a fetus with a normal heart up to the second stage, and then deliver and get a stillborn fetus.

SYRINGOMYELIA. A STUDY.*

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Surprisingly large in number and kind are the symptoms which may develop in the train of cord lesions and of these none gives rise to a more varied and interesting symptomatology than the cavity-forming disease of the cord.

Syringomyelia, first, apparently, observed by Etienne about 1546 was so named by Ollivier, who wrote in the early part of the 19th century (1824), and though written about by several anatomists (von Brunner 1688, Morgagni and Santorini 1740 et al.) from Etienne on, the condition was regarded largely as a curiosity until after 1860, when a number of writers made important contributions to the matter of its pathology.

Its most distinctive characteristic consists of a cavity formed within the cord, more commonly in the lower cervical and dorsal regions, sometimes short, involving but five or six segments, in other cases extending the entire length of the cord and even involving the medulla and pons. In some cases, two or three cavities are discerned at different levels. Usually the cavity, of any size or shape, lies near the central canal, behind the posterior commissure and may encroach largely on the posterior grey or both posterior horns, but it may occupy the place where commonly the central canal is found. Thus it may communicate with remains of the central canal or this may be pushed to one side. In its walls proliferation of glial tissue is largely in evidence.

Various theories have been propounded to account for this unusual condition and Starr speaks of five which may be condensed thus: 1. The theory of a congenital defect in cord development as the point of departure. This accounts for a hydromyelia, but some have advanced the idea that by the proliferation of glia cells, the invasion and breaking down of normal tissue, a hydromyelia may pass over in-

*Read before the Detroit Academy of Medicine and later before the Wayne County Medical Society.

to a syringomyelia. Proponents of this theory assume a close relationship and connection of the cavity with the central canal. 2. Another explanation is that the normal glial tissue (this last near the central canal), possibly from irritant or toxic influence, takes on active proliferation, invades the adjacent nervous tissues and eventually breaks down in its center, thus giving rise to a cavity formation. 3. Several workers have observed, subsequent to disease of the spinal arteries, a tendency to the formation of cavities quite independent of the central canal. Others stoutly aver that the walls of these cavities do not resemble those of true syringomyelia. 4. Van Gieson and some others have explained the cavity formation as the result of an earlier perforating hemorrhage in the cord. 5. Others have advanced the theory of bacterial infection to account for the pathological condition. Advocates of this theory would closely relate the disease to certain forms of leprosy.

Though its symptomatology may be manifold and complex as will later appear, this may be simply condensed under these heads: 1. Dissociation of sensation, a loss of the sensation of pain and temperature in any part of the body, tactile sense being preserved in the analgesic region. 2. Trophic disturbances in the skin, muscles, bones and joints, e.g. ulcers, abscesses, whitlows, cracks and fissures. 3. Atrophic and paralytic symptoms, e.g. a progressive muscular atrophy attended by paralysis. The presence of any one of these groups should arouse suspicion and the finding of any two should be fairly confirmative of the diagnosis. Extent and multiplicity of symptoms will naturally be dependent upon the size, situation and extent of the pathologic lesion.

Analytic of dissociation of sensation, the course of the sensory fibres in the cord is here pertinent. Fibres conveying pain sense enter the posterior horn and ascend from two to eight segments, in the grey matter before decussating, after which they ascend in the column of Gowers (ascending anterolateral tract), a part to the cerebrum, a part, for pain reflexes, to the cerebellum and inferior olive. Fibres conveying a sense of heat and cold take much the same course, though separate and apparently separate from each other, since some patients show a differing impairment of sense to heat and cold.

Tactile sense fibres travel upward in the posterior columns of the cord on the same side, probably decussating higher up. Sense of position comes from the joints, of motion from the muscles. Let us note first: *The Motor Disturb-*

ances: Among the irritative symptoms are found various spontaneous movements and tonic spasms of muscles and phenomena not seldom observed as the result of motor involvement, as loss of power or rigidity in an extremity. Muscle atrophy is especially frequent in the upper extremity, for example in the ulnar group of hand and forearm and this may proceed from distal extremity to shoulder-girdle. It is rarely symmetrical. Club foot sometimes occurs. The muscles of the neck may be involved and a proliferation of a sub-cutaneous fat may hide the resulting atrophy. Sundry infiltration processes have been noted, some of them very like a myositis ossificans. Hypertrophic and pseudo-hypertrophic changes occur as also changes in electrical reaction, as a decrease of excitability to faradic and galvanic currents. Fibrillary twitchings in the atrophying muscle-bundles are noted and varying muscle and tendon changes, a crepitating tendovaginitis, Dupuytren's contracture of palmar fascia. Histological changes are found in muscle fibres and in intra-muscular vessels and nerves. Exact and sharply defined localization of affected areas is often impossible. The gait may be varyingly modified, a forward inclining (festinating), an ataxic or a staggering gait or there may be a combination of cerebellar-ataxic and spastic-paretic gaits.

Under *Sensory Disturbances*, we shall of course find much to claim our attention. The quality of perception may be changed, especially that of cold and heat perception; there may be pains, often severe and not infrequently they may be shooting in character. Lesions are most frequent in the cervical and upper dorsal cord and pains accordingly are of relatively frequent occurrence about the shoulder or as occipital neuralgiae. Sometimes the dorso-lumbar and lumbo-sacral regions are the seat of pain due to a lower situated lesion. Paraesthesiae often occur early in the disease. In a hundred reported cases, there were simple paraesthesiae or pains noted at first and out of 297 cases from another observer, 34 were painful at beginning. In 36 cases, 13 had pain as an early symptom.

The resulting sensory disturbance may be with segmental limitations or it may be of the glove, sleeve, or stocking variety. The vest form has been noted or the entire back may be anaesthetic and in a few cases nearly the entire surface has been involved. There may be a sensory hemiplegia.

Laehr's investigations speak clearly for the segmental arrangement of sensory disturbances but Schlesinger has found the disturbed zones arranged like bands, like strips and twice in

spiral form. A sensory hemiplegia may occur and may arise from an existing syringomyelia in two ways: 1. From disease of the white substance involving the long sensory paths within the cord or medulla. 2. From long extending disease of the posterior horns.

Modification of tactile sensibility may occur, though in very many cases the tactile sense is intact. If a blunting occurs, it seldom advances over large areas to complete anaesthesia and its limitation is usually segmental in character. Delayed tactile sense is rare.

Pain Perception: A period of great irritability to slight irritations may precede the later development of complete analgesia, which itself may follow a gradually increasing hypalgesia. A needle has been painlessly carried in an elbow-joint. Mucous membranes may share in the anaesthesia. Muscle atrophy with or without direct relation to the sensorily involved areas, may occur and develop long after the sensory involvement. There may be merely delayed perception of pain. If we investigate the anaesthesia in detail we shall find one form arising from lesion of the long sensory tract and the other conditioned upon invasion of the grey substance.

Temperature perception may be variously impaired. There may be (1) a delay in perception or (2) an increasing failure to note temperature at certain points, a greater defect, or (3) such dissociation that heat and cold are perceived much alike or, instead of a perception of warmth, only that of touch is apparent, or (4) the perversion may be such that cold provokes sensation of warmth and heat that of cold. Thermo-anaesthesia or thermo-hypaesthesia may develop relatively early. Legends of heroic deeds with knives, furnaces, etc., are believed to have had syringomyelias as their active characters. The mucous membranes of oesophagus, stomach, urethra, etc., may participate in this sense impairment.

Impairment of deep sensibility: Both lower extremities may show an impairment of muscle-sense or this may be of hemiplegic or monoplegic type. As to extent, duration, etc., this will depend upon the character and extent of posterior column involvement. The Romberg symptom and ataxia may be present. Pressure-sense, more rarely concerned, may be impaired. The stereognostic sense is often greatly impaired or lost and, since dependent upon two factors (a) superficial and (b) deep sensibility, may be seriously interfered with by an impairment of either. That bone-sensibility is, in cases, much affected is attested by painless, spontaneous fractures and by painless opera-

tions upon the bones. Not only the pain-sense of the bones may be lost but also the specific sensibility of the bones to tuning fork and other vibrations.

Unless it be tabes, there is no other disease so frequently illustrative of the etiological influence of the nervous system in tissue changes.

Trophic lesions of the skin are most frequent and manifold in their development and here are found cutaneous hyperaemias, both active and passive, as also cutaneous anaemias. Here, too, are oedemas whose spinal origin is attested by the intact vessels, normal heart, kidneys, etc., in connection with their unusual situation, which is most frequently in the upper extremity. These oedemas of syringomyelia are peculiar in their vanishing, their intermittences and their development. Not to be confounded with these oedemas is the condition termed by Marinesco "main succulente" in which the dorsal surface of the hand is swollen, now a small area, now the whole dorsum and even the fingers. There is no pitting on pressure. This, according to Marinesco, is due to two separate processes, one, spastic, in the cutaneous cells and one a vaso-motor change of altering intensity, producing dilatation of the small arteries, capillaries, veins. The swelling arises not from mechanical causes but from nervous influence (excitation of a spinal vaso-motor center with succeeding paralysis.)

Anomalies of secretion and affections of the skin are significant and interesting. Affections of the perspiration are chiefly of three forms—an excessive secretion, a lessened or abolished function, and a paradoxical sweat reaction, when e.g. the patient sweats from the effect of cold rather than heat. In the face, the anomaly may be sharply limited to one-half and hyperidrosis is more common than anidrosis. An upper extremity may exhibit one or the other and sensibility may be simultaneously impaired. Sometimes a lower extremity is involved, sometimes half the trunk. Various inflammatory dermatoses sometimes supervene. There may be acute or chronic: angio-neuroses, vesicular and phlyctenular outbreaks of dermatitis, erythematous inflammations, phlegmonous with plastic exudate, or a condition known as gangreniform skin; cutaneous hemorrhages, hypertrophies, atrophies, benign neo-plasms, cutaneous ulcers. The nails may be changed in form or appearance—thickened, thinned or dulled.

Joint and bone affections: The joints of the upper extremity are more often involved, though much more rarely than in tabes are both sides of the body affected. From 20 to 25 per cent of cases show joint involvement. Joint affection

may be an early symptom. One observer thinks it most commonly beginning at about 40 and trauma may be its starting point. In rare cases, these troubles show coördinated symptoms, e.g. a double congenital dislocation of the hips. In contrast to tabes, too, these troubles seem to prefer the upper extremity, about 80 per cent. occurring in the upper, and 20 per cent in the lower extremities, about the reverse of tabes. The shoulder-joints and the male sex are most commonly affected. Various circumstances, e.g. the occurrence of trauma and the absence or abeyance of significant sensory or trophic changes, may direct attention to other than the underlying spinal lesion and render diagnosis difficult. In two reported cases, (Ssokolow's) of apparently purely traumatic dislocations of the shoulder, only a very careful investigation disclosed the existing syringomyelia.

The joint affections in this disease develop only rarely in the lower extremities and are more often unilateral. Their beginning is often apparently acute and marked changes in the joints may develop rather quickly, although, pain, according to Londe and Perry and in accord with the experience of Schlesinger, may long have been noted (in some cases for over a year) at the site of the later developing arthropathy. Lancinating pains and even pain crises have been observed (Brissard and trophic skin troubles, (blisters, pustules, etc. may also occur. At the start, especially in the light form, no deformity of the joint is seen, but creaking and rubbing sounds are observed, sometimes so loud as to be heard at some distance. The movements may be painless and even pressure may cause no discomfort. The supporting ligaments may become so loose as to allow considerable excursion of the affected joint. The capsule becomes stretched and extended and may rupture. Effusions do not as a rule last long and are soon absorbed, the affected joints often assuming normal aspect, though the trouble may recur on light provocation. Spontaneous luxations, more frequently of the shoulder, may occur and become habitual. Spontaneous fractures or epiphyseal separations are not unknown: Anchylosis, changes, hypertrophic and atrophic, combined or singly, suppurative processes, impairment of superficial sensation over the joint, dissociation of sensation (thermo-hypo—or anaesthesia) have all been noted and painless operations without anaesthetic have attested the loss of sensation in some of these joints, movement and manipulation being felt but pain-sense quite lost. Schlesinger cites in great detail over 80 cases of many varied changes.

Bone changes play no inconsiderable role and may be hypertrophic or atrophic, e.g. hypertrophic of fingers or toes, unusual exostoses, spontaneous fractures, most often of the forearm, frequently without the patient's knowledge and occurring during heavy lifting or other unusual exertion or even during the usual motion of walking, without consciousness of unusual motion or effort. The bone changes are similar to those occurring in tabes, and causing like accidents, sometimes involving the whole bone, in other cases only a portion of the bone exhibiting a spontaneous necrosis. Various scolioses and chest deformities naturally result from varying vertebral degenerations.

Overgrowth and atrophy of single body sections occur and these though differing materially have been confused with acromegalic conditions. Thickenings and enlargements are bilateral and proportioned in acromegaly while mutilations and deformities are frequent in syringomyelia, without regard to symmetrical occurrence.

Reflexes: The skin reflexes, commonly not obtained may be increased. The abdominal cremasteric, often involved, are absent (naturally) in anaesthetic areas. The tendon and periosteal reflexes are not seldom wanting in muscles close to an arthropathic joint and their loss has been noted in extremities the site of sensory changes yet showing no muscle atrophy. An increase in the tendon reflexes has been noted in cases in which rapid emaciation has occurred and in which the muscles have been involved en masse rather than any special muscles (resembling an amyotrophic lateral sclerosis), as also in another group in which rigidity rather than atrophy dominates the clinical picture. In the lower extremity, very often the patellar, plantar, and adductor reflexes are significantly increased. Increase of the tendon reflexes of the lower extremity is a so frequent symptom in the cervical and bulbar form that their non-appearance or their loss dims the clinical picture. Indeed the increase of tendon reflexes, particularly the knee-jerk has been so emphasized that but little attention has been paid to their lessening or loss. Yet this is not rare and may be due to (1) a combination with typical tabes, (2) disease of the lumbar cord and destruction of the reflex path by cavity formation and (3) through an accompanying meningitis.

The uropoietic system: Frequently these patients escape for years any bladder involvement but rarely such symptoms are among the earliest noted. The more usual course is the development of the bladder symptoms only with the full development of the disease and their

advent may be either sudden or gradual. Sensory disorders, here, particularly those of temperature sense have been reported and the impaired integrity of the cystic mucous membrane may lead to enormous cystic distention, this easily leading to affection of the motor powers. A simple polyuria, an albuminuria or a glycosuria may be either temporary or permanent symptoms. Rectal complications (sphincter paresis) or paralysis of the rectal musculature are more rare as also disturbances of the sexual function. These naturally occur more usually in a syringomyelia of dorso-lumbar or lumbosacral type.

Bulbar, brain and cranial nerve disturbances: Cranial nerves from the 5th to the 12th have been directly affected. Rarely the olfactory and 8th nerves are affected. Taste is sometimes involved. Lesions involving the optic nerve are observed, a small number of cases with optic atrophy. Hysterical cases should be carefully discriminated.

As regards the anomalies of the ocular muscles in syringomyelia, 3 groups are found: (1) Nystagmus or similar twitchings; (2) Ocular muscle paralysis; (3) The symptom-complex following sympathetic paralysis. Chronic inflammation of the ependyma, lesion of the aqueduct of Sylvius, injury to the vestiform body have all been separately assigned as the anatomical basis of these disturbances. The number of cases is small. Paralysis of the extrinsic muscles were found 33 times in the literature, commonly occurring in late stages. Abducens paralysis was most frequently observed. The intrinsic muscles show a considerable number of cases of impairment. Inequality of the pupils is also of relatively frequent occurrence. Sympathetic paralysis may be caused by a lesion of the upper thoracic cord.

Affection of the trigeminus, because of its frequency, deserves careful attention. Out of 200 reported cases, 17 times was this nerve affected, and out of 300 cases, 28 presented symptoms relating to the fifth nerve. Pains and paraesthesias both as to pain and temperature are common and these patients often suffer from frightful neuralgias for years without a syringomyelic condition being at all suspected. Extensive sensory paralysis may be found in the region of the trigeminus distribution. The first, second and third segments are most commonly involved in these cases and sensory defects show a segmental distribution.

Facial paralysis, not rare, if it occurs, is commonly of slow development and may happen from nuclear or direct nerve involvement. If

bulbar symptoms arise they are markedly chronic in their course.

Psychic conditions are comparatively few, though some maniacal as well as depressed states have been known. Patients with trophic impairment are especially apt to be sulky, peevish, complaining little, non-communicative.

It will readily be seen that the extraordinary multiplicity of possible symptoms, its changing course and varying onset make difficult its ready division into forms and yet in certain cases, it does assume certain types as: 1. Syringomyelia with classical symptoms, which may be subdivided into (a) cervical type, (b) bulbo-medullary form. 2. Syringomyelia with chiefly motor symptoms; and here are found (a) cases in which the symptoms of an amyotrophic lateral sclerosis may conceal a syringomyelia and (b) cases in which conditions of a spastic spinal paralysis are especially prominent and (c) cases of a scapulo-humeral type. 3. Forms with largely sensory symptoms: (a) hysterical sensory hemiplegia and zones simulating such forms and (b) cases of more general anaesthesia. 4. Syringomyelia with principally trophic symptoms: (a) with the symptom complex of Morvan and (b) osteo-arthritic form. 5. Tabetic Type. 6. Pachymeningitic Type. Of these the cervical type has been longest known and most studied and its early stages are quite characteristic. The patient notes an increasing weakness of one hand, the ability to hold objects is lost, tearing pains, often of extraordinary intensity, are complained of in the arms and paraesthesia of temperature occur. There may be a clearly defined atrophy of the hand muscles and trophic changes in the fingers not rarely develop. Although but a limited area, perhaps only one finger, is at first complained of, a little later tests will show sensory changes in the other hand or arm involving pain and temperature sense or both. Contracture of the fingers, "claw-hand," atrophy of forearm muscles or of deltoid may follow.

The knee-jerks are increased, ankle-clonus is often present, the reflexes in the upper extremity lost and scoliosis may later develop.

The dorso-lumbar type is no rarity, the lumbar enlargement being not infrequently the site of cavity formation. The symptoms, varying, of course, in location are similar to those mentioned above. The reflexes are highly increased before the reflex arc is broken, and the paralysis is of the spastic type, though a complete paralysis may follow in a very short time. Genital, bladder and sphincter symptoms follow.

The lumbosacral type includes those cases in which the lowest portion of the cord is involved

and is one of the rarer occurrences. Motor involvement and atrophy is here largely in evidence in the leg and smaller muscles of the foot, sensory changes in the perineum, genitals and lower extremity. Trophic changes may appear anywhere below the knee. Spontaneous fractures are here not rare.

In the bulbo-medullary form, bulbar symptoms dominate the clinical picture. Its occurrence is a rarity.

Its manifold symptomatology makes extensive the consideration which may be given to the differential diagnosis. Amyotrophic lateral sclerosis may be closely simulated with its progressive muscular atrophy, rigidity, with paresis and increased reflexes. Pain and sensory changes may characterize both. Unilateral symptoms and limitation of areas will speak against the one and for syringomyelia, as also will the extent of trophic lesions, sensory involvement of the skin, and lesions of the bones and joints. Asymmetrical bulbar symptoms will also be in favor of syringomyelia.

Those disease conditions which are embraced under the term, spastic spinal paralysis, present difficulties of discrimination. Paresis with rigidities, increased reflexes, and eventually contractures are among the commonest of symptoms of syringomyelia and with their development sensory and trophic symptoms may lay but little claim to attention, though a long period of observation will ultimately uncover them, and the occurrence of some muscular atrophy, bladder and rectal involvement and genital symptoms will serve to establish the diagnosis.

A possible confusion with a diffuse sclerosis of brain and cord may be averted by the sensory involvement which will speak in favor of syringomyelic conditions. Multiple sclerosis, though it may be simulated, will yet be differentiated by the sensory, trophic and other symptoms, which eventually stamp syringomyelia, and especially the extensive muscular atrophy ultimately occurring and the sensory changes. A chronic poliomyelitis will be rather distinguished by the sensory, bladder, and rectal symptoms since a progressive muscular atrophy is its own peculiar feature, and the dystrophies will be differentiated in much the same way. The more rapid onset and shorter course will remove confusion with a subacute myelitis, though there may be many symptoms in common. Tabes, with its sensory changes, bone involvement and sphincter complications may be confused for a time and present difficulties of diagnosis, but the trophic symptoms later developing will differentiate the two.

Syphilis of the cord, luetic meningo-myelitis,

Friedreich's disease, intra and extra-medullary tumors, traumatic affections of the cord, combined system affections, paralysis involving the region of the brachial plexus, some polyneuritides, the neurotic form of progressive muscular atrophy, progressive bulbar paralysis, pseudo-bulbar paralysis, cerebral diplegia (Little's disease), leprosy, are some of the diseases which may present points of similarity which may serve to make difficult an early diagnosis yet a sufficiently long observation will usually clear away all doubt.

Commonly, diagnosis is not difficult. The dissociation of sensation, often of segmental distribution, the trophic lesions and the slow course will confirm the suspicion of syringomyelia. Out of 260 cases collected from the literature, 174 were in males and 86 in females and of these 260 cases, 221 occurred between 10 and 40, 156 between 20 and 40.

The varied course and beginnings of the many sided clinical picture have already been referred to. Most frequently, subjective impairment of sensation gradually announces the early development, especially through paraesthesiae of the temperature sense (and through pains in the extremities which are sometimes severe). This stage may last through years, with temporary intermissions until more marked sensory loss intervenes. In other cases, the sensory disturbance is more in the background and motor impairment of certain muscle-groups is markedly in evidence. In still other cases it is the trophic symptoms which will arrest the patient's attention. From here on, the further course of the disease is governed by the varying pathologic basis present. If there is larger tumor formation in the cord, with central breaking down, the formation of genuine glioma, the downward course is a rapid one. Muscle atrophy rapidly develops; from motor paresis the step is a quick one to complete paralysis, sensory irritations are greater, sensory paralyses quickly develop, bladder and rectal symptoms ensue and threatening bulbar involvement is not rare. Quite otherwise with syringomyelia without tumor development, the course here being markedly chronic, even as long as 30 or 40 years. The outlook as to life is excellent in these cases, especially when the lesion is confined to the lower cervical and upper dorsal regions, less good if the lumbar and sacral cord be involved, bladder and rectal symptoms, cystitis, pyelonephritis, here hastening the end. Prognosis is bad, too, in the event of bulbar involvement, though, in the absence of tumor formation, the course may be subacute or chronic and of long duration.

Complications with progressive paralysis, cerebral or cord lues, tabes, tumor, hydrocephalus, of course increase the gravity of prognosis and intercurrent febrile affections not seldom unfavorably affect the course of the disease. Arthropathies, spontaneous fractures, contractures, ulcerative processes call for their own special treatment. Resort to baths, etc. does not bring the disease process to a stand-still, hot baths often seeming to hasten rather than hinder its progress.

The pathological basis of this many sided affection involving anatomical changes of important structures, precludes of course the possibility of cure.

It is to be hoped that the foregoing is not too prolix a presentation of that which, though rare, is yet a most interesting disease, remarkable for its multiform symptomatology and possibilities.

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INTESTINAL STASIS: ITS MECHANISM, ETIOLOGY, AND TREATMENT.

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The great number of people suffering from constipation and other disorders of the large intestine, together with the enormous amount of cathartic consumed per day, convinces me that there is a lack of knowledge among the people regarding the function and management of their intestines. Furthermore, from talks with physicians and with patients regarding advice from previous physicians, it is apparent that the medical profession in general is not far second in knowledge or either has no interest in the proper management of this portion of their patient's anatomy.

PHYSIOLOGY OF THE INTESTINES.

The gastro-intestinal tract may be considered as a muscular tube endowed with a normal muscular tone, rhythmicity and irritability. It is essentially an automatic organ, like the heart. Its stimuli to movement arise within itself, but these movements are regulated by the action of the extrinsic nerve fibres, so as to adapt them to varying conditions. Its nerve supply from without comes from two sources: 1. the vagus, stimulation of which causes contraction and 2. the sympathetic, stimulation of which causes inhibition of gastro-intestinal movement. Its

contents move from regions of high to regions of lower tone, rhythmicity and irritability.

Bayliss and Starling (1) formulated the "Law of the Intestines" or Myenteric reflex, which states that "excitation of any point of the gut excites contractions above and inhibition below." Cannon (2), however, has shown that this myenteric reflex and peristalsis are not the same thing, and that the reflex is not always in control of the bowel and does not govern the rhythmic contractions, peristalsis or anti-peristalsis which are dependent on the tonus of the canal. Alvarez (3) has also shown with his enterographs that relaxation rarely occurs before an oncoming peristaltic wave while "on the contrary powerful contractions occur which serve to stop the rush from going too far." This must be so else food would not remain in the gastro-intestinal canal long enough for digestion and absorption to take place.

Cannon (4) from roentgen observation on the large intestine of cats, divides the large intestine into two parts. The first includes the ascending and transverse colon where the most frequent movement is anti-peristalsis, which serves to keep the fluid intestinal contents in the caecum for more complete absorption of food and water. The second portion includes the descending colon where food is moved only towards the rectum by the peristaltic waves.

Material does not move along the canal unless the pressure is greater on one side than on the other. (Cannon.)

The presence of food or an irritating lesion in any part of the tract tends to raise the tone and irritability of that point. Hess (5) has shown and this has been confirmed by Alvarez (3) that the normal tonus and irritability is higher in the upper portion of the canal and diminishes as one goes down until the rectum is reached, when the tonus is relatively high again. This was shown by measuring the pull (due to peristalsis exerted on small balloons placed in different portions of the intestine and having a string attached to them which went up and out of a gastric fistula. The ileum was shown to be sluggish compared to the jejunum. Alvarez believes the steepness of the gradient of forces varies with different people and at different times.

It has been shown that by stimulating either end of a loop of intestine that waves could be caused to go in the opposite direction, i.e., up or down and that by stimulating the center of the loop that waves would go in both directions (2).

Clinically numerous instances of this reverse transport of intestinal contents could be cited.

*Read before the Detroit Academy of Medicine, March 20, 1920.

Regurgitation of duodenal contents into the stomach is now considered a common thing.

A barium enema is often seen to be carried high into the ilium, and reverse peristalsis is observed with the X-ray. Hemmeter (5) cites experiments in which charcoal, sawdust, etc., was injected into the rectum of rabbits, guinea pigs, and rats and was found 6 hours later all along the small intestine and even in the stomach. Also that food injected into the rectum appears hours, sometimes days after from an intestinal fistula.

Alvarez by instrumental methods detects small reverse peristaltic movement in the intestine which could not be seen by the eye.

Rehfus (6) found the colon bacillus in nearly 80 per cent. of his duodenal cultures in pathological cases and attributes many cases of gastro-duodeno-enteritis with or without disease of the biliary passage to this "mild reverse peristalsis" of Alvarez. Rehfus says, "the more I see of gall bladder disturbances and also trouble with the gall ducts, the more I am impressed with the primary importance of the bowel." On the basis of this reverse peristalsis Alvarez explains vomiting, regurgitation, nausea, heart burn, coated tongue, etc.

Keith (7) believes that impulse conduction in the intestinal canal resides to a great extent in certain neuro muscular cells situated between Auerbach's myenteric plexus and the muscle fibers of the intestine. These cells partake of the character of both nerve and muscle and he calls it nodal tissue because of its similarity to nodal tissue in the heart. He finds this tissue plentiful in the region of the sphincters of the digestive canal and at certain other places, and suggests that nodal aggregation serves as a pace maker for peristalsis in the zone distal to it. He believes that the effect of disordered conduction is not limited to the related sphincter, but extends to the segment beyond and that disturbance of rhythm in one zone tends to disturb the rhythm in other zones.

If Keith's work is correct which must be confirmed and studied, we have a good reason for disordered action of the bowel, just as we have in heart block and the arrhythmias of the heart. If oedemia, inflammation, or degenerations occur in the neuro-muscular tissue one would expect corresponding irregularities of peristalsis, either temporary or permanent, according to the extent of the lesion, furthermore one would expect the vagus and sympathetic systems to exert their influence as occurs with the heart. That the vago-sympathetic does exert much influence on the working of the gastrointestinal tract is without question.

Intestinal stasis is often considered to be mechanical in nature i.e. due to various bands, kinks, folds, adhesions, etc., (Lane). These can often be demonstrated but at the same time the stool can be shown to pass them without trouble.

Iliocecal valve incompetency was considered a cause but now I believe is taken to be a result of a distended caecum.

The large intestine is a tube which varies in position in different individuals depending much on the patient's build, the presence of an asthenic habitus, etc., its function is everything and its position of little importance.

With the Roentgen ray (8) several types of movements in the colon are seen. The haustral markings are due to contractions of the circular fibers on the longitudinal bands, which are shorter, producing the formation of sacculations. Mass movements occur several times per day usually associated with the taking of food, emotional causes, etc. When this occurs the bowel loses its haustral markings and the stool is formed into a sausage shaped mass which is pushed along around the flexures for 8-12 inches. With a sensitive colon this is accompanied by colicky pains. Reverse peristalsis is often seen extending from a tonus or constriction ring, in the transverse colon near the hepatic flexure, passing backward towards the caecum. These shallow waves serve to cause a greater retention of semi-solid fecal contents for the absorption of water and food.

A disturbance in function is shown at first by an exaggeration of these reverse waves, with spasm in the proximal portion of the transverse. This causes greater retention in the cecum, distention, atony, and regurgitation into the ilium. There is also greater drying out of the feces which are formed into hard scybala, which causes irritation and keeps the vicious circle in operation.

Later the transverse colon assumes the same disturbed function and gives rise to the typical spastic colon, with loss of haustral markings.

The etiology of these spastic conditions can often be associated with a general state of hyper-tonicity, neurosis, hyperthyroidism, or with a reflex from a diseased appendix or pelvic organs. The same is true from a distended rectum due to unheeded calls to defecation, obstruction from a retro-verted uterus, a rectocele, or a spastic rectum from hemorrhoids, or a fissure. Cathartics by virtue of their irritation may start and so keep the whole disorder going. A later stage is a mucus or ulcerative colitis.

Regarding the comparative frequency of

spastic and atonic conditions of the large bowel as observed by the Roentgen ray, Carman and Miller (9) state that in their experience the spastic is less often observed. It must not be forgotten however, that the opaque enema is a very soothing application and that slight or moderate spasms and reverse peristalsis may be present only at times of irritation and absent at the time of examination. Case (10) however, believes that spastic conditions of the colon are most common.

Eggleston (11) believes that the colon is spastic in most cases of constipation and that the dilated caecum is secondary, due to back pressure.

From a clinical standpoint it is certainly true that most constipated patients give a history of marble sized balls or scybala, with or without mucus. It is hard to conceive of these scybala being formed by an atonic bowel, but must be pressed together by firm and continued contraction. Stools small in diameter or ribbon shaped are due to a spastic sigmoid or rectum.

THE QUESTION OF INTESTINAL AUTO-INTOXICATION.

Auto-intoxication is a term widely used and little understood, and often is a cloak for ignorance. About all the symptoms that man is heir too, has been laid at its door, chiefly due to the teachings of Bouchard, Metchnikoff and Lane, and their supporters. The advertising concerns for various cathartics, liquid petrolatum, agar, bran, lactic acid bacilli, and patented rectal syringes have been quick to do their part in disseminating these ideas among not only the medical profession but chiefly among the layman.

Let me say at the start that there is no real scientific evidence to support the theory of auto-intoxication, and that the supposition is a clinical one and better explained on an infectious, a nervous or an anaphalietic basis.

Wooley (12) has given an excellent critical review of the subject. It has not been shown that absorption of toxic protein split products from a healthy bowel will produce symptoms of disease. These toxic protein split bodies are rendered non-toxic before they reach the blood. He states that under abnormal circumstances proteins fed to animals may be recovered from the blood and urine but with a normal bowel these experiments were not confirmed. Another possibility of toxemia lies in the absorption of products of abnormal bacterial growth, such substances belong to the ptomain group such as cadavern, putrescin, etc., or to the aromatic series such as indol, skatol and tryo-

sin recently the aldehydes and histomine have been mentioned in this connection. These substances are toxic, but it has not been proved that they reach the interior of the body in amount to be poisonous. Herter has shown that indol might be toxic, but Wooley and Newburgh have also shown that the body is able to take care of much larger amounts of these substances than are produced. Indican or phenol combinations in the urine do not show that they are acting as poisons in the body but that the contents of the large intestine are not in a healthy condition. Metchnikoff showed that by means of feeding certain organisms (*B. bulgaricus*) the bacterial flora of the intestines can be changed but Kendall, Schmidt, Torry and others have shown that the same may be done by diet alone.

Another possibility of toxæmia lies in the presence of bacteria themselves in the blood stream secondary to focal infections in the intestinal wall or mesenteric lymph nodes just as such infections lie in the tonsils, teeth, gall bladder, prostate, etc.

Wooley obtained a pure culture of *B. lactis aerogenes* from a duodenal mesenteric lymph node.

Under conditions of poor health infection lying in various foci is able to invade the blood stream, but with improvement in the general condition the blood becomes sterile.

Chronic infection of the crypts of the rectum are known to be of not uncommon occurrence.

With chronic intestinal stasis lesions of the intestinal wall are often produced, varying from localized catarrhal areas to an extensive colitis or to localized or extensive ulceration. Wooley states that an intestinal wall which is the seat of such inflammations is more permeable to bacteria than a normal one, and that bacteria and toxic materials may pass into circulation.

Associated with these conditions of the large intestine one very frequently finds much evidence of infection in the mouth, throat or accessory sinuses. Many nose and throat men would have us believe that these infections are the only cause and that their removal along with a turbinate, etc., will cure all stomach and intestinal disorders. Such is not the case as evidenced by the numerous patients who consult us after having gone the round of tooth extraction, tonsillectomy and nose repair. Such foci may in many cases be primary but the infection has since been transported and produced other foci. In other words while it is wise to clean out all evidence of foci of infection in the head, these patients do not recover without

treatment directed to their intestine and nervous system as well.

Smithies (13) states that examination of the large bowel in chronic constipation often shows damage to the epithelial and muscular coats from actual invasion by bacteria, resulting often in inflammatory peritoneal bands or adhesions, patches of intestinal wall myosites or the actual scars of repair in the muscle layer. This has its effect upon both the motor and secretory function of the gut.

Alvarez (3) believes that all the symptoms ascribed to stasis and intoxication are the nervous ones, i.e. that constipation is generally due to nervousness and that in these sensitive people the brain is influenced by impulses arriving from a distended, over-acting or wrongly acting bowel. He bases his opinion to a great extent on the fact that in some people all these symptoms may be produced by a rectal tampon and that relief of symptoms is often obtained almost immediately after a bowel movement, too soon to be accounted for by an actual poisoning. In my experience such sudden relief is the exception and not the rule. However, it is certainly true that most constipated people are neurotic, over worked or worrying.

ETIOLOGY AND CLASSIFICATION

Having considered the normal and pathological physiology of the intestine it is easier to understand the etiologic factors, symptomatology and treatment involved. One can see that it is not possible to make any strict classification of these conditions, but can only say, and I wish to propose the name, a *Disordered Action of the Bowel*, manifested by stasis, diarrhea, mucus, pus, pain or whatever happens to be present, and indicating to some extent the state or severity of the disorder.

Formerly constipation cases were divided into the atonic and spastic forms, but this is not borne out clinically, as both may be present in the same case, or a constipation today may be a diarrhea tomorrow and then designated a colitis.

The symptoms arising are motor and when the normal progress of food is disturbed. As suggested by Alvarez this may come in four ways: 1. A stoppage. 2. A slowing. 3. A speeding, and 4. A reversal of the current. These alterations may come from, 1. Influences in the lumen of the bowel, mechanical or chemical, 2. Disease in the bowel wall, inflammatory, irritations, ulcers, etc., or actual obstruction from tumors, bands, a rectocele, etc., and 3. Afferent nerve influences.

From an etiologic standpoint patients with chronic disordered action of the bowel may be divided in five big groups: 1. Dietetic and Cathartic. We have considered how the contents of the canal are forced along by the peristaltic waves and that these contents furnish the stimulus to peristaltic action. The food of today furnishes the stool for the 3rd or 4th day. On a small residue diet this may be 5 days while on a large residue diet it may be shortened to 2 days. Stools may be easily marked off by administering a dose of charcoal or carmine.

Civilization has changed our habits of eating since our alimentary tract was formed. We eat a white bread from which the normal cellulose has been carefully removed. We live in cities where fresh vegetables are scarce and costly. We eat hurriedly of non-residue containing food, because it is easier and quicker to get and eat.

In spite of this the average person feels that he should have a good bowel movement every day. He doesn't, so he takes a cathartic, the advertisement of which he has probably seen in the paper or on a billboard. The result is a good watery movement and he feels better. The next day he has no stool because the colon has not yet had time to fill, so on the 2nd or 3rd day he takes another cathartic and so on until the cathartic habit is established.

Most cathartics are irritating and produce a watering of the membrane of the bowel just as they would produce a watering of the eye were they applied to that mucus membrane. Continuous application of these irritants produces a catarrhal condition of the bowel with mucus, accompanied by a disordered action, manifested by spasm or reversed peristalsis to protect itself from the oncoming irritant.

2. The second most common group of constipated people are the neurotics, here the whipple tree action of the vagus and sympathetic is upset and we get various manifestations of intestinal disorder. To treat these people without making an attempt to uncover their apprehension and straighten out their conflicts in life is a mistake. The effects of emotions, anger, fear, disgust, etc., upon the motor functions of the gastro-intestinal tract has been amply demonstrated both clinically and in the laboratory.

3. This group includes those bowel disorders arising reflexly from disease in other portions of the body such as pelvic inflammatory disease, chronic appendicitis, gall bladder, gastric ulcer, etc.

4. This group is rather common and includes the general asthenia group (asthenia universalis) manifested by ptotic abdominal

organs, drop form heart, long thorax, and abdomen, floating tenth rib, etc., together with autonomic nervous system disturbance. Here also would come the congenital malformations of extra long and redundant colons, and the acquired ptoses from a stretched out sagging abdomen following repeated pregnancies. These people have more or less gastric disturbances and soon fall into the dietetic cathartic group.

It might be argued that many of these people have an actual partial bowel obstruction, and need short circuiting operations, their kinks straightened out, and bands, etc., removed, but this is not borne out clinically as they generally respond to accurate bowel management. It is true that many have more difficulty in getting their intestinal contents along towards the rectum. They have a weak spot in their anatomy which may have to be favored for years, or all their life, just as a broken leg may partially incapacitate that member for a long time. However, the longer their bowel is working right, the nearer they are to recovery and the more liberties may be taken in their diet.

5. The fifth group is more rare and includes cases of actual organic obstruction such as tumor masses either in the bowel or pressing on it from without. Here also one would include rectocele and hernia where the bowel pushes out through the abdominal wall or vagina and produces a blind pouch, against which the normal movements cannot act. Hypertrophy of the rectal valves may also cause actual partial obstruction.

It must not be assumed that this grouping is always distinct, as most cases come under more than one group, and practically every case ends with a cathartic habit. It is rarely that a patient consults us while cathartics are still efficient, or before they have bowel pain or distress.

DIAGNOSIS.

It is apparent that a thorough history and physical examination must be done to determine the cause, results and stage of the disease.

The most important point I am making, and one which seems to be often overlooked, is that spasmodic and perverted bowel contractions are frequent and produce distress or pain in any portion of the abdomen and often are diagnosed gall stones, peptic ulcer, chronic appendicitis or cancer. In fact we not infrequently see these patients after they have had one or more operations for these conditions.

Abnormal abdominal sensations often come immediately after eating due to pressure of a

distended stomach on a sore transverse colon. Again they come several hours p.e. when the food first hits the caecum. Again they come one, two, or three days later when a particularly indigestible or irritating mass reaches a diseased portion of the large bowel. Often they are associated with a cathartic and are relieved after a bowel movement. Generally a bowel movement influences this condition in one way or another. The same is true of a large enema. The average colon holds about 10 pints and we often give a test enema up to 8 pints and watch the results, as manifested by producing or relieving the patient's usual distress or pain. Bastedo's test of inflating the large bowel with air acts in a similar manner.

Examination of the stool is a much neglected procedure. In 1915 I called attention to this and gave a short treatise on the essentials of stool examination. (14) The form, consistency and color should be noted and food remnants and pathological constituents looked for. The macroscopic observation is fully as valuable as the microscopic. Mucus may appear with any irritation, but if here are many pus cells incorporated in it there is probably ulceration present. Mucus and pus from high in the bowel is often overlooked because digestion of it occurs as it proceeds in the bowel. A cathartic will often increase it. Blood indicates ulceration or haemorrhoids.

TREATMENT.

With the foregoing knowledge in mind the treatment of Disordered Action of the Bowel becomes very simple if too great damage has not been done.

First remove all organic hinderances, if such are present, to the onward propulsion of the stool, as far as possible, either by conservative surgery or abdominal support when needed. Then adjust the diet according to the condition present in the colon. It has been brought out that most constipated bowels are suffering from over rather than under stimulation and irritation. The principle of treatment is as follows: Absolute rest until all evidence of perverted peristalsis, disordered action and irritation are gone, then gradually work the cellulose content of the diet up, being careful to avoid irritating articles, gradually giving the bowel more of a soft mass to knead and work on, much as one would allow a convalescent from a long illness to get out of bed and gradually get back to work. Sippy (15) uses this method and obtains excellent results.

At the beginning of treatment it is well to see that all hard seybulous masses, and irritat-

ing material are out of the bowel by giving a mild cathartic or 2-4 high non-irritating enemas.

With a severe or moderately severe bowel disorder, the patient should go to bed with heat applied to the abdomen for pain or distress. The diet then is restricted to boiled milk and oatmeal gruel, later adding, soft eggs, custard, toast, crackers, rice, cream of wheat, bread and butter, cream soups and well cooked oatmeal. Then in about one week, depending on the case, the residue leaving non-irritating foods are added. First more well cooked oatmeal, then mashed potatoes one or two times per day. Potatoes are valuable because they are palpable, rich in food value, soothing to an irritable bowel and leave about 25 per cent of their original bulk in stool. Then the white is changed to rye or graham bread. Next vegetables are added, first spinach in gradually increasing amounts, one, two or three times per day, then cautiously carrots, parsnips, squash, cauliflower, Brussel sprouts and turnips. These vegetables produce a stool nearly equivalent to the amount taken. Spinach is the least irritating and the most soothing. Cabbage leaves a big bulk, but is too irritating. Later cooked fruits are added as prunes, figs, peaches, marmalades and apple sauce.

Bran leaves a good bulk but as such is too scrapy. Rolled wheat containing the natural bran is excellent to produce bulk. A happy medium between bulk and too much irritation must be maintained. Fruits in general leave a bulk equivalent to about 25 per cent. of the amount taken but in addition to this they are irritating like a cathartic, so are contra-indicated if there is a tendency to pain or distress.

No cathartics are given; for temporary relief from constipation a 3-4 oz. enema of olive oil or any good cooking oil is given at bedtime when there has been no stool that day or the stool was very hard, and if no bowel movement occurs before 10 a. m. the next day, a 1 pint warm tap water enema is given. At the beginning of treatment these oil enemas are not given until faeces can be felt in the rectum.

A glass of warm water is given before breakfast, two between each meal and one at bedtime, making six glasses or three pints per day. When the bowel movements have become normal and a gain in weight is desired, a glass of

20 per cent cream is given at each meal and 1 hour before bedtime together with 3-4 eggs daily.

The patient is instructed to avoid ice cold drinks, beer, buttermilk, lemonade, cider, fruits and fruit juices, honey, excessive sweets, cabbage and sauerkraut, also cold taking and chilling.

For medication the usual remedies for coating over the bowel are given, a combination of calc carbonate, calc phosphate, and bismuth subnitrate 20 grs. of each three times daily between feedings, serves the purpose in most cases, and helps to hasten the disappearance of irritative symptoms.

Let it not be forgotten that constipation is often but a symptom of a psycho-neurosis, a hyperthyroidism or other internal secretory disorders, and treatment should also be directed at these causative factors.

Encouragement is all important in the neurotic and if the patient cannot be made to fit into his present environment, the latter should be changed to fit the patient. "Treat the patient himself," and as Patrich (16) remarks "may we add to the sum total of human health, happiness and progress."

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THE ROLE OF THE TONSILS IN PULMONARY TUBERCULOSIS.

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In the last decade the attention of the general medical practitioner has been directed to—

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ward the important problem of the relationship of focal infection to systemic disease. His interest in this phase of medicine has been due largely to the efforts of the laryngologists, who as pioneers in this work in the early nineties emphasized the importance of pharyngeal lymphoid disease and demonstrated the real significance of the tonsils as portals of entrance for infection. While the individual worker basing his conclusions alone upon clinical observations failed at first to excite the interest of the general practitioner, the clinician in co-operation with the bacteriologist has within the past few years produced sufficient scientific facts in the study of focal infection to place before the medical world a very important factor in medicine.

That primary tonsillar infection is often responsible for the dissemination of organisms with the production of systemic disease is no longer a disputed fact. The excellent work of D. J. Davis in an investigation of 45 cases of rheumatism proving that the deep tonsillar crypts harbored pure or nearly pure cultures of streptococcus which when injected into rabbits in small doses produced an arthritis is only one of many convincing experiments substantiating this claim. While we turn with ease to an abundance of medical literature treating at length the subject of focal infection and containing a wealth of experimental work on the effects of many pathogenic organisms found within the tonsils, we find with difficulty only an occasional treatise on the subject of primary tonsillar tuberculosis.

That primary infection of the tonsils with the tubercle bacillus does occur is an established pathological fact. We are therefore prompted to ask the question, "What is the future behavior of this organism once it has established itself within the tonsillar tissue?"

While the data herein contained based chiefly on clinical observation fails to answer this question, it serves the purpose of suggesting a possible explanation for the frequent association of tonsillar and pulmonary tuberculosis.

In the routine pathological analysis of 8,600 tonsillectomies examined by Dr. Warthin and Dr. Weller, to whom I am indebted for the statistics herein compiled, about 2 per cent. were found to be tuberculous. Prior to the year 1916 the total per cent. was four. This strik-

ing decrease in the past four years can be attributed to two factors, first that previous to 1916 the department of Otolaryngology admitted many children from the various State Institutions in whom the occurrence of glandular tuberculosis was exceedingly common and second, that during the past four years the proportion of elderly patients operated has greatly increased owing to the increasing popularity of the tonsillectomy as a therapeutic measure in neuritic and arthritic conditions, while the incidents of tonsillar tuberculosis in childhood is much greater than that in late adult life.

Crow from a study of 1,000 tonsillectomies at John's Hopkins University found 7.9 per cent. tuberculous in colored and 3.5 to 4 per cent. in white patients. Other observers have reported 6 and even 8 per cent. From the combined statistics of many pathologists the average incidence of tuberculosis of the faucial tonsils might be estimated at about 4 per cent.

What proportion of tonsillar tuberculosis represents a primary infection with the tubercle bacillus and what per cent. becomes secondarily involved from some other quarter, still remains a much disputed question. The laryngologist from a clinical standpoint considers the former a latent type with no demonstrable surface lesions and without local signs or symptoms, while secondary tuberculosis is looked upon as a manifest form characterized by the presence of a tuberculoma without ulceration or of single or multiple surface ulcerations presenting the distinguishing features of the mucous membrane lesion. In the study of 200 cases of tuberculous tonsils only four presented clinical manifestations of the disease. In each one of the four cases there was present an extensive pulmonary involvement with a definite history that the lung affection long antedated the invasion of the throat. Undoubted cases of primary tonsillar tuberculosis with surface lesions have been reported but they appear to be exceedingly rare. While the latent type may be either the result of primary or secondary infection, it seems correct to assume that the manifest form is in the vast majority of cases an evidence of hemogenous or lymphogenous metastasis or direct inoculation from some other focus in the body.

Returning to my original question, referable to the future behavior of the tubercle bacillus

once it has entered the tonsillar tissue, the answer involves a discussion of the modes of dissemination and the effect of the organism upon distant parts. That the germ may enter the blood stream and secondarily invade remote tissues is a claim made and supported by many. The frequent occurrence of bone, joint, and skin tuberculosis could scarcely be accounted for in any way other than the result of hematogenous metastasis whether the portal of entrance be the pharyngeal lymphoid tissue, the respiratory system or the digestive tract. In this connection the following case is of interest:

A male, age 38, was referred by Dr. Wile for nose and throat examination. He gave a history of a recent sore throat followed by the sudden appearance of an eruption which covered the entire surface of the body. There were no other complaints. His general health was excellent, his appetite was good and he had maintained his normal weight during the recent illness. The skin lesion was diagnosed by Dr. Wile as diffuse tuberculides covering the entire surface of the body. Careful clinical and X-ray examination failed to demonstrate a lesion elsewhere. Examination of the throat showed the tonsils to be markedly hypertrophied with numerous deep crypts filled with a caseous material. A tonsillectomy was performed and the pathologist reported a diffuse active miliary tuberculosis of the tonsils. It was of interest to note that 24 hours following operation rapid involution of the skin lesions began and four weeks later there was not a trace of the skin disease to be found. Six months has now elapsed since operation and the patient has remained perfectly well.

The wide spread distribution of tuberculous lesions in the skin must necessarily be explained on the basis of hematogenous metastasis. That the preceding case represents a purely primary tonsillar infection is difficult of proof. Nevertheless in the light of the following evidence, namely; an acute miliary tuberculosis of the tonsils with a complicating skin involvement, the failure to demonstrate a focus elsewhere in the body and the striking therapeutic effect of the tonsillectomy we might correctly assume the tonsils to be the primary source.

It is with the second mode of dissemination, namely, lymphogenous tuberculous metastasis that my subject is chiefly concerned. The frequent occurrence of tonsillar and glandular tuberculosis with pulmonary apical involvement

has often led to the suspicion, there might exist some direct lymphatic path from tonsil to lung. It has been generally admitted that the tubercle bacillus may pass thru the tonsils, thence thru the lymphatics of the deep cervical chain, on into the thorax to the hilus of the lung where it is finally distributed thru the visceral pulmonary lymphatics. If we assume this theory to be correct, how can we account for the frequency of apical lesions. It doesn't seem rational to assume that the organism entering the visceral lymphatics at the hilus and enjoying the freedom of dissemination in all directions would choose the extreme apex of the lung in preference to the parenchyma surrounding its portal of entrance. In other words, if this is the correct theory, why is the apical lesion so commonly found as the first evidence of pulmonary tuberculosis. With this subject in mind and attempting to find an explanation the Department of Roentgenology has recently made an interesting discovery and one that promises to be an aid in substantiating the theory of a direct lymphatic pathway from tonsil to lung. They have demonstrated in stereoscopic x-rays of many tuberculous chests the presence of a distinct thickening of the pleural covering the extreme apex of the lung which they have termed an apical pleural cap. Various degrees of this pleural thickening can be found ranging from a thin cap with smooth visceral surface to a thick apical pleural with tent shaped projections dipping into the substance of the lung. With extensive involvement of the apices the definition is lost and the cap, massed in the shadows is hidden from view. Such a pathological change in association with a frank pulmonary lesion was easily explained on the grounds of secondary infection of the pleura from within. However, the frequent occurrence of the apical pleural cap in the absence of pulmonary tuberculosis could only be rationally assumed to be the effect of infection from without. With this in mind further study led to the x-ray examination of cases known to have had tuberculous tonsils or glands. While the statistics herein compiled including only 29 cases could scarcely justify any pretentious claims, the association of tonsillar and glandular tuberculosis with pleural and pulmonary involvement is most striking.

If our clinical conclusions justify the assumption of a direct lymphatic pathway from

tonsil to lung, what experimental work have we at hand to substantiate this claim? In this connection the work of Grober is of interest. His experiments included studies on the lymphatic drainage of the tonsils in dogs. Six months following the injection of one tonsil with Chinese ink he demonstrated at autopsy that the dye could be traced into the deep cervical lymphatics, thence directly to the apical pleura and into the parenchyma of the lung where it was seen as a diffuse grayish discoloration of the cellular structure of the apex. In reviewing the work of Grober one is much impressed with the painstaking methods employed. The detailed analysis of autopsies convinces the reader that his claims for the presence of a direct lymphatic route from tonsil to lung are well founded.

CONCLUSIONS.

1. The combined statistics of pathologists show the evidence of tonsillar tuberculosis to be about 4 per cent.

2. Primary tonsillar tuberculosis with surface lesions appear to be exceedingly rare. While the latent type may be either the result of primary or secondary infection, the manifest form presenting local signs and symptoms is usually an evidence of secondary invasion from some other focus in the body.

3. The frequent occurrence of bone, joint and skin tuberculosis favors the theory of hemogenous metastasis.

4. The generally accepted theory of lymphogenous dissemination from tonsil to hilus and thence by visceral lymphatics to parenchyma of lung does not satisfactorily explain the frequency of apical lesions.

5. The striking association of tonsillar and glandular tuberculosis with an apical pleuritis in the absence of a pulmonary lesion suggests a direct lymphatic drainage from tonsil to pleura. In the light of Grober's experiments and the clinical evidence at hand I believe such an assumption to be well founded.

Lansing, Aug. 2—The ranking of Michigan counties and cities as to safety for babies has brought to the State Health Department many questions about the relative healthfulness of rural and urban districts. Health Commissioner R. M. Olin, gave out today some comparisons which show that last year many rural districts had a higher infant death rate than some large cities. In six counties babies born in larger cities had a better chance to live than in rural and semi-urban parts of the counties. The rates here given are deaths per thousand births in 1919:

Wayne County, Detroit,	98, rural	121
Jackson County, Jackson,	102, rural	102
Alpena County, Alpena,	125, rural	172
Gogebic County, Ironwood,	105, rural	113
Manistee County, Manistee,	60, rural	94
Grand Traverse, Traverse City,	65, rural	109

In some other counties the cities had unenviable records compared with surrounding rural districts:

Ingham County, Lansing,	130, rural	64
Kent County, Grand Rapids,	84, rural	68
Bay County, Bay City,	101, rural	45
Genesee County, Flint,	110, rural	88
Delta County, Escanaba,	97, rural	76
Ishpeming County, Marquette,	114, rural	85
Menominee County, Menominee ..	99, rural	81
St. Clair County, Port Huron,	132, rural	98
Chippewa County, Sault Ste. Marie, ..	96, rural	76

"Our purpose in issuing these facts," said Commissioner Olin, "is to remind parents and health officers throughout all sections of Michigan that babies can be saved in these most dangerous weeks by steps easily within reach."

Palestine's first medical journal, "Harafooah," (Medicine) has just made its appearance, published by the Jewish Medical Association of Palestine. The journal is a quarterly and its first issue is dedicated to the memory of the Jewish physicians and nurses, who "lay down their lives in the years of upheaval in the Holy Land."

The objects of the medical association, as outlined in the quarterly are to strengthen and co-ordinate the medical forces of the country and to collaborate with doctors outside Palestine; to give the medical work a national as well as a humane value; to prepare a native soil for Jewish scientists; and to help in the creation of the Hebrew University.

Medical work in Palestine has advanced rapidly during the past two years, stimulated by the American physicians and nurses with the American Zionist Medical Unit, who have taught the native members of the profession, all the latest ideas in medical work and sanitation. Clinics are held by the American doctors, to demonstrate to the Palestine doctors, the most modern methods, and lectures are given at regular intervals.

The hospitals and clinics established by the American Zionist Medical Unit in Palestine, are planned as the beginnings of the Medical College of the Hebrew University at Jerusalem which Prof. Patrick Geddes, noted town planner of the University of Edinburgh, is designing.

The Journal

OF THE

Michigan State Medical Society

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September

Editorials

MEMBERSHIP CAMPAIGN.

Appended hereto is a table revealing the number of members in each county society, the number of non-members and number of non-members eligible for membership. These figures are derived from our records and from reports made by county officers. Twenty county societies have failed to answer *four letters* sent to them requesting data, consequently we cannot complete our survey and show definitely how many eligible non-members there are in the state. On August sixth from the replies received we find that there are 261 physicians who should become members. Of course there must also be some in the twenty counties that have failed to reply to our letters.

The situation resolves itself into two problems:

(a) To wake up twenty county societies and secure replies from them and to cause them to undertake an active campaign to secure the non-members within their boundaries and also to cause them to pursue a plan of society activity.

(b) To secure as members the 261 physicians who have been reported as eligible.

The first problem we intend to attempt to solve by keeping at these twenty non-responsive societies and to secure their co-operative efforts. The counties that fail to respond will be published in our next issue. Surely, a letter on this subject merits a reply. A society that ignores such a request is not represented by efficient officers.

The second problem we hope to solve by having each of the county societies reporting, conduct a personal campaign among these eligible non-members and secure their applications during October. Most of these societies already have a committee at work.

We want to secure, during the month of October, the application of every eligible non-member. If we all join in, devote just a little time, we can put it across. What we desire is 57-100% societies. "So let's get set."

County Societies	No. of Mem.	No. of Non- Mem.	Non- Mem. Eligible for Mem- bership
Alpena -----	23	2	1
A. C. E. -----	22	5	5
Barry -----	18	4	4
Bay -----	58	10	5
Benzie -----	8	—	—
Berrien -----	20	—	—
Branch -----	16	14	14
Calhoun -----	101	—	—
Cass -----	7	—	—
Cheboygan -----	8	1	1
C. L. M. -----	24	7	6
Clinton -----	21	7	7
Delta -----	19	8	5
Dickinson -----	11	6	4
Eaton -----	18	3	3
Genesee -----	106	12	6
Gogebic -----	20	8	7
Grand Traverse -----	22	7	7
Gratiot, Isabella, Clare --	30	18	18
Hillsdale -----	18	—	—
Houghton -----	45	16	16
Huron -----	15	—	—
Ionia -----	13	—	—
Ingham -----	85	27	25
Jackson -----	47	—	—
Kalamazoo -----	118	22	4
Kent -----	153	—	—
Lapeer -----	26	4	4
Lenawee -----	29	—	—
Livingston -----	6	—	—
Macomb -----	27	—	—
Manistee -----	15	7	3
Marquette -----	40	5	2
Mason -----	4	—	—
Mecosta -----	16	0	0
Menominee -----	9	6	6
Midland -----	—	—	—
Monroe -----	21	3	1
Montcalm -----	16	12	10

Muskegon -----	55	16	11
Newaygo -----	10	3	3
Oakland -----	53	—	—
O. M. C. O. R. O. ----	10	—	—
Ontonagon -----	8	2	2
Osceola Lake -----	4	—	—
Ottawa -----	31	8	2
Presque Isle -----	0	7	7
Saginaw -----	52	29	29
Sanilac -----	14	12	12
Schoolcraft -----	7	0	0
Shiawassee -----	28	11	11
St. Clair -----	47	—	—
St. Joseph -----	26	5	5
Tri-County -----	21	—	—
Tuscola -----	19	—	—
Washtenaw -----	89	15	15
Wayne -----	979	—	—
	<hr/> 2708	<hr/> 322	<hr/> 261

PUBLIC HEALTH ADMINISTRATION.

By Dr. W. A. Evans, Former Health Commissioner,
Chicago, Ill.

Four years ago the American Public Health Association very definitely entered on a policy of recognizing state public health societies. Prior to that time they had discussed the subject for years, as had various other health and medical societies. Three years ago they changed their constitution to make the parent organization accord with the plan.

During this period of time they had a committee at work, stimulating the organization of state societies and clearing away obstructions. We find that there are about twenty national health societies, with some division of health work as a major activity. The number of state societies in each state ranges from four to fourteen.

Some of these state organizations are fairly active; some have a fair membership, *but most are propaganda organizations with only a nominal membership and officers in name only.* We see great advantage in many directions in federating these societies and obtaining for the united organization a large, strong, popular support.

In the organization of state health societies, this state has assumed leadership. There were state health societies before yours was organized but none is more promising than yours or organized along better lines. Already you have had calls for copies of your constitution and outlines of your plan and others will, no doubt, come to you for advice and counsel.

One of the several functions of a state health society is to serve as a post graduate school for health officers. When you are large enough to divide into sections you will have one division known as, possibly, the section on public health

administration. To it, administrative heads will bring their questions and have them discussed by men of experience in administration.

The larger part of the services of health officers in Michigan is administrative in character. In our schools of hygiene, I think we can fairly say laboratory work is given undue prominence—at least so far as the work of the present day health officer is concerned. Of the men in this room, of the health officers in this state, it is true that but a very small part of their time is spent in laboratory work.

It would be very difficult to teach in a school just the qualities needed in an administration. There is, and always will be, a need for a section of a health society which will serve as a post graduate school for health officers. I suggest to your officers that as soon as your size will permit, you organize a section on public health administration and that the discussions in that section be limited to matters which concern administrative health officers. And now permit me to act on the suggestion and get right down to a discussion of some of the problems of the administrative health officer, particularly the county health officers and the town and small city health officer.

There is some evidence that the death rates are higher; there is more typhoid fever; a higher baby death rate and more physical defects among children in the rural than in the urban population. When these statements have been made the people in the rural districts have sometimes denied their truth. In most instances the essayists claiming the rural death rate to be higher, have made their dividing line the city of 10,000, all populations in cities over that being counted as urban, all below that as rural.

To this their antagonists have demurred. They show that the heavier rates in the so-called rural group are in the cities and towns of 1000 to 10,000 and that such populations are not rural. They claim that the line should be drawn at incorporated towns, or towns with a community sewerage and a community water system. They claim that the heaviest rates of the types referred to above are in this group of communities and whichever class they are put into will have the higher rates.

In discussing some of the problems of health officers, I have the officials of this class of communities especially in mind. The duties of a health officer belong under several heads:

1. He is the administrator of the state and local health laws.

2. He is an advisor to the city executive and the city council.

3. He is an inspector, combining the duties of a medical inspector and a sanitary inspector.

4. He is a registrar of vital statistics.

5. He is a laboratory man.

My first suggestion is that he take advantage of his relations to the city council to secure health legislation—just as much as he can foresee any need of, say, in the ensuing five or ten years—and a little bit more. I have in mind that for many activities of health officers he has no legal warrant. The right to do health work is based on the fundamental police power. This is the greatest, most far reaching and most effective of all powers.

In times of great emergency, when people are stirred, health work can be done under police power with great effectiveness and acts of the health officer will be sustained even tho he takes property, destroys property or restrains liberty, and all without law or in the face of law. But except in such times, health work can only be done under the law.

Let me impress upon you the importance of getting ordinances and laws for your every activity. It is your work to draw up the essentials of all such laws, leaving their technical legal points to be covered by the proper official. In some Eastern states the board of health have considerable power to make rulings and ordinances having the same force as those made by other legislative bodies. Not so over most of the country. The rule elsewhere than in the East is that the health board is an administrative body, wholly without legislative authority. They have the right to make rules for internal administration, for the guidance of their employes, but none for control or guidance of the general public. They may decide to enforce within limits, but that is administrative and not legislative.

In most states the legislature or the constitution gives city councils the right to legislate on certain health subjects. Their rights are limited to the powers specifically given them. The health board has no right to legislate except such rights as have been specifically given. Go to the proper legislative bodies with requests for the legislation needed to protect your community.

In this legislation try to keep just a little in advance of public sentiment. If you are too much in advance, your community will not back you up unless you have a forceful personality and a capacity for winning presentation. If you are behind your community sentiment, they lose respect for you. If no more than abreast of it, you fail in your duty.

When you act as an inspector, let me suggest that you make your records on standard forms. The preparation of such forms and blanks might well be one of the functions of this association, acting thru committees. Most of the present health officers have had no academic training. They have been trained by their experiences in their offices or in the army. The reports and records of such health officers will gain immeasurably in value if made on standard forms and blanks. The large city health departments now have blanks and score cards for every kind of inspection. There is not so adequate an equipment for the smaller city health officer. The present score cards would need some changing.

In so far as the health officer acts as a sanitary inspector, he does work as to the value of which there is much controversy. The ablest exponent of what may be called the "Chapin school," Hill, has written a book entitled, "The New Public Health," in which he argues the unimportance of sanitary inspection, and the importance of control of contagion by control of the carriers, principally human carriers.

When Chapin reported a few years ago to the American Medical Association his valuation of the work of the various state health departments, several objected to the conclusions of the report, saying that however it might be in Providence or even in Rhode Island, in their states sanitation was a more important requirement than the report made it appear. It has been many years since Pettenkofer promulgated the theory that disease resulted from filth and that communities could lower their death rates by securing clean water, by sewage disposal, garbage disposal, street and alley cleaning, by household and personal cleanliness.

Later Koch promulgated the theory that disease was due to bacteria and there followed as a development the efforts of cities to limit contagion by control of cases and carriers. As a matter of fact, each theory is supplemental to the other. Unfortunately, however, they are sometimes set against each other. The time will come when the Pettenkofer idea will become so intimately a part of the thought of the community that health officers can disregard them and put all their thought on work under the Koch theory, but that time is not here.

Vaughan says that the standard of performance along this line in the army was high enough. He did not say that of the army of 1898. Our civilian standards are now not far from the level of the army of 1898—probably below them but with less harm resulting because contacts are not as close and the Michigan cli-

mate, bringing the thought home, is not as near tropical as that of the camps of 1898.

You must still act as sanitary inspectors, administrators and guides. With the part time health officer, serving also as a private practitioner of curative medicine, the most difficult work of the health department will be medical inspection. The work of visiting contagion in his own clintele, or the clientele of his competitors; the disputed diagnoses when the disputants feel on a par with the health officer, create impossible situations. Diagnosticans from the state department are of some service, but the only way out is the whole-time health officer.

We should all work to provide the grouping of towns with an organized whole-time department serving the group. In La Salle, Peru and Oslesby they comply with the technical legal requirements by having a nominal health officer in each town. The central health department operates in Peru, for illustration, in the name of the local officer.

When it comes to laboratory service I have this suggestion to make—much laboratory work can be done in the public schools. The pupils in the higher grades can make the dirt test and the Babcock test on milk. It would not require much development to have the high schools make gross bacteriological counts on milk and water and do similar laboratory diagnosis in contagion. In some communities where a joint health department is not feasible, a joint laboratory service could easily be arranged.

I trust when you come together next year a session may be devoted to several problems of the health year. A request for information as to what you are specially interested in would point the way to a program for next year.

There is one subject which you should discuss every year. It is the creation of a public health profession and the fundamental for such a profession is such stability as will come from—

(a) higher pay.

(b) a proper method for the selection of health officers.

(c) greater security in office.

Editor's Note: This paper was read at the Kalamazoo meeting at the meeting arranged for by the section on Public Health. It is such a valuable paper that we are giving it all the prominence possible.

CONSTIPATION.

We desire to draw our readers' attention to the article published in this issue—Intestinal Stasis, written by Dr. Lockwood. In our opin-

ion it is a most timely and practical discussion of a subject that confronts every doctor in the treatment of his patients. Likewise, it is one that receives practically the least careful consideration. The prescription pad or the bottle of cathartic or laxative pills are too handy and it is so easy to say: "Take two on retiring," and let her go at that. For our more fastidious patients of course there is eating of bran, agar-agar, petroleum oils, etc., that are readily prescribed, do some good but we still remain in the dark, so does the patient and our treatment is empiric.

We trust this article will inspire a more careful examination and a more scientific treatment of our constipated patients. May we also request contribution of similar practical and scientific discussion of other conditions that we are too prone to treat in an ineffective routine way?

Editorial Comments

Formerly we were freely confronted by essayists and discussants who, preceded, included or concluded their papers or discussion with the stock phrase "When I was in Germany," or "When I was in London and Edinburg," for the purpose of creating impression and prestige. Now we have a new generation and a new phrase for "impressing introduction"—namely—when I was in the Service" Of the two we believe we all are going to be more tolerant of the latter. We never did worship "Hun Kulture" nor were we ever impressed by those who paid allegiance to Hunisms.

The problem of trained nurses, training courses and availability of trained nurses still remains an acute one. There is no denying of the fact that a trained nurse with the present scarcity in number, let alone the weekly charge now made, is beyond the means of the average home. They simply cannot afford their services. The time is at hand when some provision must be made to meet and solve this problem. In direct bearing upon the subject is a recent comment by Dr. W. J. Mayo, published in the *A. M. A. Journal* and which we reprint herewith:

The arrangement in the Ancon Hospital of an eight-hour schedule for the trained nurse calls attention to the fact that the registered nurse under present conditions is a luxury that cannot be obtained except by the well to do, and this brings up the question: Is the trained nurse a luxury or a necessity? The answer must be that she is a necessity. The high-standard registered nurse is one of the greatest blessings of modern civilization. She has spent three years of twelve months each in training after graduation from high school, thirty-six months in all, the equivalent of a university course of four years of nine months each and in a university the same time

and work would have won for her the degree of Bachelor of Science. The registered trained nurse is not overpaid, considering the character of her training; rather is she underpaid, for she represents the best type of human machine for the care of the sick. But we need other types of nurses less highly trained but nevertheless important social service vehicles, the Fords, so to speak, of the nursing world. If representatives of the nurses' union are approached on the subject of vocational training to develop a large number of young women for this important work they are indignant and call attention to the fact that standards are being raised for physicians, and they ask why they should lower theirs. In this connection it should be remembered that the physician is expected to care for rich and poor alike, and allow no one to suffer for lack of such care, regardless of his ability to pay for service. This is not and can never be the case with the registered trained nurse. A solution of the problem of the training of a sufficient number of nurses is difficult. My sympathies are with the highly trained nurse, and I would be the last one to desire to curtail or reduce the training in any respect; but there are other considerations. Only one of 450 students who enter our public schools graduates from the university. One in ten who graduates from the high schools enters the university, and one in thirty graduates.

There is only the equivalent of the university graduate at the present time in the nursing world, and in the interest of all the people there should be different grades of nurses instead of a domination of the field by an aristocracy. The time will come, and soon, when there will be the same grades in nursing that there are in other forms of education, for example, common school nurses for the home and family, high school nurses with vocational training, and the university (registered) nurses. The difficulty in carrying out the plan will be in the providing of adequate training for the many young women who may apply for the "common school" course, because the training cannot consist of merely textbook and demonstration courses, but must be the care of the sick in hospitals, the most important part of the preparation. Although the difficulties are many, they are not insuperable. The first six months of the course would be the same for all applicants for various reasons many would stop at the end of this period of probation. Those who drop out at the end of the year would receive a certificate of completion of one year's work. Those who remain for the second year would receive a certificate of completion of two years' work, and those who fulfil the requirements of the three-year course would receive a diploma of graduation. The graduates, who had had preliminary cultural training, after passing suitable examinations at the state university would be granted the degree of Bachelor of Science, as the equivalent of that which is now given for training in medicine, dentistry and other professional branches.

And still the H. C. L. bug thrives with an apparent unsatisfied appetite. The Journal keenly feels the demands of increased cost of everything

and our expenses soar each month. Even the daily papers have again increased their price for subscription. If we are to remain above water we must have greater patronage for our advertisers to maintain their business. Once again we urge—patronize them.

Well, here's September again. The kids are back in school, we have had our vacation season and the mosquito bites are about all healed, the campaign workers are warming up and running in second speed and shifting into high, but we "docs" are hitting along in about the same old gait. What are you going to do in your society this fall and winter to arouse renewed interest? It's time for planning and to get under way. Who has a suggestion?

Archives of Surgery Vol. I, No. I, published by the American Medical Association, bi-monthly at an annual subscription of \$5.00, made its appearance in July. The editorial board is composed of Dean Lewis, E. Graham, H. Cabot, Thos. Cullen, William Darrach and W. J. Mayo. This new publication will serve as a medium for printing the many valuable articles on surgery that are yearly contributed to the *Journal of the A. M. A.* and for which space is not available. The first issue justifies this new journal by its contents and meets up with the purpose for which it is issued—to establish surgery upon a sounder basis, to enlarge the surgical horizon and to disseminate fundamental facts. It also purposes to comment frequently and freely on the subjects discussed by authors in order that both sides of a mooted question may be placed before the reader and the facts of a writer challenged. In brief, this new publication is a distinct addition to surgical literature. Every surgeon will want to subscribe—he cannot afford to not do so. Its make up is most attractive and characteristic of A. M. A. printing shop excellency. Send your subscription and check to Dr. G. H. Simmons, 535 N. Dearborn St., Chicago—the price \$5.00.

The impression is gained from reading various journals and daily papers that a small group of doctors scattered across the country are very much dissatisfied with the law that limits every doctor to one hundred prescription liquor blanks per month. The usual arguments of infringing upon the individual rights of a doctor in directing him what he shall prescribe in the treatment of a patient; the question of the value of liquor as therapeutic agent, and a few others are advanced to substantiate their claims as to why they should not be limited in the number of prescription blanks. It seems, however, that the profession has but one course and that is to comply with the provision of the law. This is our viewpoint. On the other hand we cannot quite conceive of any practice where more than 400 pints of liquor is required in one month. The doctor may well be observed with some suspicion who asserts that he requires more than this amount in his practice. Yes, we have heard of several localities where doctors are giving these subscriptions at \$3.00 per, to all comers who complain of catarrh, "colds," tonsilitis and simi-

lar ailments as an excuse. Wouldn't it be well to go a little slow in our demands for removal of restrictions less a skeleton be exposed in a public investigation?

From time to time we have commented upon the necessity of observing certain rules in the preparation of a manuscript for publication. Our comments have without doubt fallen upon sclerosed ears for the effect they have had. Never have we received such a motley array of papers as those read at the Kalamazoo meeting. We believe that at least an author might sign his name to a paper to identify it for then we might more readily appeal to him for aid in decoding them for publication. Oh hum, there are some things you cannot ever hope to make the other fellow see, so we are about ready to stop trying.

In a recent published communication one person expressed offense because a correspondent in discussing a subject coupled Homeopaths in with osteopaths. We are certain the author did not intend to cast any reflection and the average individual knows that these two schools are not on the same plane—we all hold our homeopaths in highest esteem and the most of them know it.

How about those doctors in your county who are not members? Have you made the effort to secure their application for membership? We want your —every county a hundred per cent. membership society.

Two years ago an average issue of the Journal cost in the neighborhood of \$375.00. One year ago it ran about \$600.00. Today an average issue costs \$875.00, the July issue ran \$1,100.00. Do you wonder why we are a bit uneasy about the future cost of issuing The Journal when our expense of publishing is still soaring with no signs of a "nose dive" or a "tail spin." Paper, labor and printer's ink sure demand payment of long prices and to maintain a desired standard we are unable to cut our size or limit our number of articles. The publication committee will hold on for a while longer but a change must come or we are sure to go broke.

The Clinical Surgical Congress will be held in Montreal in October. Preliminary programmes indicate a profitable meeting. This meeting affords an excellent opportunity to become familiar with our Canadian brothers and to learn from their teaching center. Michigan should be well represented.

Just because compulsory health insurance is not occupying front page space we are not justified to assume that its proponents are asleep. The issue is still alive and the profession has need to be alert to counteract political machinations. Have you pledged your local legislative candidates to vote against any such bill?

The Secretary of the Council on Medical Education of the A. M. A. announced the following list of Michigan Hospitals as furnishing acceptable internships:

University of Michigan Homeopathic Hospital.

University Hospital.

City of Detroit Receiving Hospital.

Grace Hospital, Detroit.

Harper Hospital, Detroit.

Henry Ford Hospital, Detroit.

Providence Hospital, Detroit.

St. Mary's Hospital, Detroit.

Butterworth Hospital, Grand Rapids.

Blodgett Memorial Hospital, Grand Rapids.

Hackley Hospital, Muskegon.

Copper Range Hospital, Tri-Mountain.

Finally we got a "nibble" from "Tonic and Sedatives." A poor "nibble" at that and not at all up to the Editor's capability—but we had several hot days that week and Chicago is not a summer resort. Funny, how all embryos like to convey the impression of age and refer back to dates and events that occurred ages before their own nuclei was formed; but then some like to dwell in the dark ages because if they appeared in a modern light their existence wouldn't even cast a shadow. We are pleased to learn that these columns are read by those outside of the state. Say, Fishbine, why don't you print the story about the Interurban and the cow—that's a 1920 quip? We haven't the space.

Correspondence

Michigan State Journal,
Grand Rapids, Michigan.

Dear Doctor:

I was very much interested in your Editorial on our Anti-tuberculosis organizations failing to fully meet present conditions. In this connection I wish to state that some two or three years ago, I brought just that matter before our supervisors, urging them very strongly to erect a tuberculosis sanatorium in Alpena large enough to take care of all the afflicted in this district. A committee was immediately appointed with power to act, but through dissensions among themselves owing to the selection of a site, the thing was dropped. I had a talk with Dr. Van Der Slice, who was holding a clinic here in May last, and told him that I had been quietly working the thing up all of this time.

After this conversation with the doctor, and embibing some of his enthusiasm. I was ready to bring it before our most efficient Board of Commerce. The "Alpena News" very kindly printed my remarks and urged the desirability of such an institution here. A little later Dr. Cabott, of the University of Michigan held a diagnostic clinic in our city, and was very much impressed with the idea of a sanatorium here, also of our making this in some sense a medical center for this portion of Michigan.

I spoke to him about my idea of having a scientific attachment to aid in the diagnosis of all difficult conditions as well as that of the chest. The doctor immediately fell into the plan and later wrote me a letter corroborating what he had stated to me in the presence of one of our most prominent business men. I read the doctor's letter and made some further remarks at

a recent Board of Commerce meeting. A committee of real live men was immediately appointed by the President and things now look rosy for a thoroughly equipped sanatorium in our county at any rate. My idea is, and it will be carried out if legal and possible, to make it an inter-county institution, taking in some five to seven contiguous counties.

I most emphatically agree with you that a place of this kind must be made cheerful, pleasant, instructive and entertaining. You will find, if you look over your old files that I wrote an article in your journal some four or five years ago in which I stated my belief, that tuberculosis cannot be cured without happiness; that the bright star of hope must be kept in the patient's view at all times, or a failure is inevitable. I also said then, what I believe still, that psychology in the proper sense has a mighty lot to do with the cure of tuberculosis.

I am sorry that you said in your Editorial, and I quote it verbatim, "Today we know that rest, fresh air and nourishing food will accomplish an arresting of the infection if persisted in." Now, Mr. Editor, I don't believe that, I never have believed it, and it will have to be demonstrated to me before I can be made to believe it. I think it a very great evil for our Medical Journals to print such tommy-rot for our lay journals and newspapers to copy, then disseminate among the families of the poor sufferers and I believe that that very thing is the cause of more deaths than can be enumerated. The non-professional don't understand as we do. Rest, fresh air and nourishing food only has a part in the cure of tuberculosis. Therapeutic factors count exactly as much. Without the combination you cannot cure any serious pathological entity. The word arrest seems to be in vogue, instead of cure. Well, in many cases it is correct, in many more it is a misnomer.

I have in my files, cases where competent bacteriologists have pronounced the sputum full of tubercular bacilli, where the temperature ran for a year or more from 90 to 104 degrees; where there was copious expectoration and everything else that goes with typical moderately advanced tuberculosis. Later the same individual was treated, cared for and examined in one of the most noted sanatoriums in America, and was found tuberculous, frequently running a temperature of 100 and over. In recent examinations by expert physical examiners and x-ray pictures, she has been told that there was a question whether there had ever been a tuberculous process in her lungs at all. Again there are very few patients in my experience whose tubercular condition was not preceded by some other disease. I am willing to admit that perhaps we have no remedy (for I have never found one) that will cure tuberculosis per se, but we have numerous remedies that may most markedly aid in the cure of the disease and that lowers the vitality or resistance to such an extent that it became possible for the individual to become infected with tuberculosis by contact, and perhaps there may be those that after all act directly on the lung. Analogy in other ailments, seems to carry out this statement. Another thing we have been taught for a great

many years and I never believed it, and have preached otherwise for at least two decades, viz: that tuberculosis was more frequently contracted by metastasis from latent focus than by contact.

I was much taken up by an article in the last number of the Practical Medicine series, published in Chicago. In this number, a Dr. Ward has studied 4,000 cases of contacts and he believes as I have believed all the time, that what is considered to be "The Authorative view is wrong."

In an article by Dr. J. H. Dempster of Detroit, on page 364 of your journal, I find these words: "A working knowledge of physical diagnosis as applied to the chest is most difficult to impart to others, as well as to acquire. It is safe to say that many physicians never become so efficient in the art of percussion and auscultation that their findings reveal the pathology actually present within the theory." I have seldom seen in print two sentences that mean so much to our profession in the examination of the chest. In order to differentiate the different sounds, no matter whether normal or abnormal, it has long been my opinion that one has to have musical ears. I was once walking through the corridor of a large hospital, when I met a thoroughly competent internist carrying a stethoscope. I knew him quite well, so I laughingly remarked, "I suppose you have been hearing all kinds of music in the chests of your patients this morning." His reply was, "Well, Doctor, to tell the truth, I'll be d----d if I can hear one quarter of what some of the fellows say they can hear, but I do find that sometimes I can hear things they don't hear." Now that physician was an experienced man and a good chest examiner. Still owing to his modesty, as he expressed himself, he was not quite sure of his ground. A man who can hear three or four different sounds at the same time and read them all, has either a very accurate musical ear or else a vast amount of experience, and comparatively few practitioners have either one, and a large number of our so-called experts have not as much acumen in that direction as many general practitioners.

I was examining the chest of a little child not long ago, percussing both back and front very lightly. The mother stood a number of feet away listening carefully to the very slight taps which I was making on my finger. She was a young woman who had a most thorough musical education on ear training and on the violin; had taken in fact a number of years from some of the greatest masters in America. She caught and differentiated every single note and could tell me the quarters and halves of difference in the musical scale. I was brought up in a musical family myself, and had a good deal of ear training, still she caught slight differences that I could not catch, even after a great many years of percussing chests. I merely make this statement to show how it comes about that the X-ray shows a chest pathology when a physical examination frequently exhibits nothing.

I, like Dr. Dempster: In all humility lay no claim to superiority in the art of diagnosis in the chest conditions as usually taught," but I am quite certain that there are ears and ears, that the good ear can at least equal if not beat the

X-ray; every time; and this is not saying a single word against the X-ray.

I am sorry that I know very little about it, but I do know that I have had rays taken by experts in Michigan, and the chest was found free from both tuberculosis and pleurisy, and within a year the patient died of consumption. It may be possible that while it takes a musical ear or a good ear, if you wish to call it so, as well as good eyes, sensitive fingers, experience and a concentrated interest, to detect abnormalities in the chest and differentiate them. It also takes a good man to read the findings of the X-ray or any other machine.

I think something else too, and feel pretty certain about it, that if there was a greater comingling and loyal co-operation between the country doctors or general practitioners and the university and other big hospital doctors, (who are or should be the scientists in our profession), that there would accrue from this a vast amount of good to the whole profession, as well as to the laity.

I will be dead before I believe that the family doctor is gone or will soon be relegated to the dust with the American Indians, the driving horse and—the billy goat.

Deaths

DR. JOHN HENRY CARSTENS.

One of the sad duties that comes to our lot is to record the death of a member, remove



his name from the mailing list and enter the date of death in our membership ledger. This

month we were unwillingly compelled to do this for one of our oldest members—one who had been our president and ever a leader in organizational work, and society activity—Dr. John Henry Carstens, of Detroit.

“Dad” Carsten, as he was lovingly termed by most of us, has been summoned from our midst. Regretfully do we resign ourselves to his demise. A man of highest attainments, a leader as well as trail blazer in the specialty he followed, a citizen of loyal trend, a friend of all the profession and teacher of many, revered by all; such is the partial summary of his life. We shall, of course, continue on our way but we will not go as far or as well without Dr. Carstens.

Doctor J. Henry Carstens was born in Kiel, Germany on June 9, 1848 and died in Detroit, August 7, 1920. He came to Detroit with his parents as a small boy. He graduated from the Detroit Medical College in 1870. He began the practice of medicine immediately. For nearly 50 years he has lectured and taught the various branches of medicine and surgery to generations of medical students. At the time of his death he was President of the Detroit College of Medicine and Surgery and Professor of Gynecology at the same institution. He was on the staffs of Harper Hospital and the Woman's Hospital. He was a member of the Wayne County Medical Society (Ex-President), Michigan State Medical Society (Ex-President), American Medical Association, Mississippi Valley Medical Association, American Gynecological Association and American College of Surgeons.

Doctor Carstens took a great deal of interest in city politics and was a candidate for mayor of Detroit on several occasions. He was formerly a member of the Detroit Board of Education and the Detroit Board of Health. For many years Doctor Carstens was an active member of the Harmonie Club and also belonged to the Detroit Athletic Club and the Detroit Club.

He married Miss Hattie Rohnert shortly after he graduated from the Detroit Medical College. He leaves besides his widow the following children: Misses Edith and Mildred Carstens, Mrs. L. J. Hirschman, and Doctor Henry Carstens.

Doctor Carstens was one of the most widely known physicians not only in Michigan but throughout the United States. For many years he was a constant attendant of the American Medical Association, Mississippi Valley Medical Association, Congress on Medical Education and other medical societies. He was a public-spirited, and was also city physician.

Doctor Victor Sisung, of Monroe, Michigan, died at his home, Sunday, June 27.

Dr. Sisung was a graduate of the Detroit College of Medicine and Surgery of the class of 1895. After graduating he was associated with St. Mary's Hospital in Detroit as interne for one year, after which he went to Monroe where he had been in practice until about seven months ago when he retired on account of ill health. Doctor Sisung served for eight years as County Physician and was also city physician.

Surviving are the widow, three sons, two brothers and one sister.

Doctor H. Beach Morse died very suddenly at his home in Bay City, Monday evening, July 12.

Doctor Morse was born in Brighton, Michigan, in 1872 and was a graduate of the University of Michigan of the class of 1896. After practicing general medicine at Elk Rapids, and specializing for a short time in eye, ear, nose and throat in Lansing, he moved to Bay City.

His widow, one son, his mother, one brother and two sisters survive him.

Doctor L. J. Locy, age 64 years, died at the Goodrich General Hospital, August 16. Doctor Locy had practiced at Davison, Michigan, about thirty years.

State News Notes

For Sale, house with office attached, barn and garage. Value \$5,000. No better country and small village practice anywhere in the State, ten grade school, electric lights, two churches, etc., in village of Orleans, Ionia County. Reason for selling, moving out of State. Price \$3,000, half down, balance mortgage at 6%. Write Journal for further particulars.

For Sale—Bay City, Michigan. Eye, ear, nose and throat practice and office equipment. Mrs. H. Beach Morse, 1602 9th St., Bay City, Mich.

COLLECTIONS.

Physicians Bills and Hospital Accounts collected anywhere in Michigan. H. C. VanAken, Lawyer, 309 Post Building, Battle Creek, Michigan. Reference any Bank in Battle Creek.

Block for sale—The two-story office and residence block of the late Dr. E. P. Partlow of Constantine, Mich., for sale. Dr. Partlow left a good practice with residence and office well located and in fine condition. Any physician looking for a good location and able to purchase office and residence block write W. F. Thomas, Administrator, Constantine, Mich.

What is reported as the largest medical conference ever assembled in China was held in Feb-

ruary of this year. A message from the minister of education of China was read stating China's medical education policy—

1. To establish new medical schools as soon as conditions will allow, one medical school for each province.

2. To improve and extend such schools as are already established.

3. To encourage the study of medicine and to maintain for the scientifically trained doctors a high social status, aiming at a sufficient number for this important profession.

4. To cause to be organized at proper localities such institutions or facilities of investigation as will aid specialists in their research work.

5. To regulate the practice of doctors trained in the traditional way with a view to the unification of standards required of medical practitioners.

For a number of years the University of Wisconsin has been giving the two year medical course. Recently this University has obtained authority to offer a complete four year medical course. It is reported that the teaching of the third year will begin in fall of 1923 and that of the fourth year in the fall of 1924. The Act provides also for the establishing a State Hospital at Madison. This new hospital together with the University Infirmary and the Bradley Memorial Hospital will furnish the necessary beds for teaching.

The Trustees of the University of Alabama have ordered the removal of the Medical School from Mobile to Tuscaloosa, as this school failed to obtain a class A rating with the Council on Medical Education of the American Medical Association. The University is establishing what will be practically a new medical school. During 1920-1921 only the work of the freshman year will be given and in the following session two years work will be given. The clinical courses will not be offered until such time as the University feels that they can be established on a high plane.

The Huron Milling Company of Harbor Beach, Michigan, is erecting a new Hospital for community use. This is one part of the welfare work being done by this company, for Harbor Beach. The company is just completing a community house at a cost of almost \$100,000, which with a municipal bathing beach and a public park and the new hospital will be presented to the city. The hospital will be modern in every particular and will be under the direction of Dr. Bache Van Nuys who resigns a position with the Victoria Copper Co. to accept this position.

Doctor William G. Wander, M.D., Washington University, will be associated with Doctor H. R.

Varney, of Detroit, after October 1, 1920. Doctor Wander was formerly head of the resident service of the Barnard Skin and Cancer Hospital of St. Louis.

Doctor Frank B. Walker of Detroit is Chairman of Committee of Arrangements for the first convention of the "Officers of the Great War" to be held in Detroit, September 7, 8, 9, 1920. Doctor Walker was authorized to appoint the chairman and members of the sub-committees.

The General Educational Board of the Rockefeller Institute has announced the gift of \$5,000,000 to Rochester University to be used in connection with a second \$5,000,000 given by Mr. George Eastman for the founding of a school of medicine and dentistry.

Doctor David Inglis, Ex. President of the Michigan State Medical Society, and for many years one of the leading alienists in this state, has retired from the practice of medicine. He has bought a home in Ann Arbor and will spend his winters in the South.

Doctor Willard L. Brennell, formerly of Roxbury, Mass., has been appointed Superintendent of the new Highland Park Municipal Hospital. Doctor Brennell will take charge October 1, 1920.

Doctor William F. Coburn, of Casey, Illinois, has purchased the residence and practice of Doctor J. M. Blackman at Quincy, Michigan.

County Society News

GRATIOT-ISABELLA-CLARE COUNTY.

The Gratiot-Isabella-Clare County Society met at Brainerd Hospital in Alma, Aug. 12.

Dr. A. O. Hart, of St. Johns, was the out of town guest, and read a paper on "Group Medicine, Its Advantage, and Disadvantage."

This paper was discussed by nearly every one present.

For a clinic Drs. Brainerd, Barstow and DuBois showed several interesting cases of fractures and other surgical conditions.

E. M. Highfield, Secretary.

Book Reviews

THE NEWER METHODS OF BLOOD AND URINE CHEMISTRY: By R. B. H. Gradwohl, M.D., and A. J. Blaivas. 2nd Edition. C. V. Mosby Company, St. Louis. Price \$5.00.

A second edition of this already valuable and reliable reference book has been necessitated by the recent development of new facts in technic and interpretation of blood and urine chemistry. These facts have been incorporated into the pres-

ent volume with the result that a much larger and more valuable book has resulted. A book such as this should assist in many ways towards developing an interest in a more complete study of the blood and urine by practical physicians of today.

DISEASES OF CHILDREN. By John L. Morse, A.M., M.D., Harvard Medical School Professor of Pediatrics. W. M. Leonard, Boston. Price \$7.50

This discussion presents two hundred histories of actual patients selected to illustrate the diagnosis, prognosis and treatment of the diseases of infancy and childhood. There is also included an introductory section on the normal development and physical examination of infants and children.

As outlined it presents many helpful suggestions and is an ever handy and reliable consultant. We feel inclined to commend highly and at the same time to express the hope that our readers will avail themselves of the help that will be secured from the study of this text.

HUMAN PARASITOLOGY, with Notes on Bacteriology, Mycology, Laboratory Diagnosis, Hematology and Serology, by Damaso Rivas, M.D., Ph.D., Assistant Director of the Course in Tropical Medicine. University of Pennsylvania, Octavo Volume of 715 pages with 422 illustrations and 18 plates most of which are in colors. Philadelphia and London: W. B. Saunders Company, 1920. Cloth, \$8.00 net.

The author has succeeded in writing a very pleasing and scientific discussion of his subject. It is a subject of vital importance to students, physicians, health officers, certain business interests and communities. The work is based upon the author's twenty years of investigation and study.

DIAGNOSIS AND TREATMENT OF BRAIN INJURIES. William Sharpe, M.D., Professor Neurological Surgery, New York Polyclinic. Cloth, 757 pp., 232 illustrations. J. B. Lippincott & Co., Philadelphia.

This is the most complete discussion of injuries to the brain, their diagnosis and treatment that has come to our attention. Further, it is such a practical and understandable presentation that it is a most interest absorbing treatise. The author further amplifies the text by excellent case histories, which emphasize the points discussed. Part III deals with brain injuries of newborn babies and children.

In the first part there is a most comprehensive discussion of pathology, diagnosis and treatment. In the light of this presentation, which records the modern viewpoint of those of broad experience, there exists no reason for clinging to the theories and traditions of the past in dealing with skull and brain injuries. It is demonstrable that a goodly number of these cases will recover when accorded proper treatment. Many there are who cling to firmly to a palliative attitude; likewise many become at once pessimistic when such a brain case is encountered. In order that these extremes may become less in number, we urge a wide securance and study of this text. We are greatly impressed with its merit.



Adrenalin in Medicine

1—Its Physiological Action.

THE active principle of the medullary portion of the suprarenal gland and other chromaffinic cells, adrenalin, has been used by physicians throughout the civilized world since the day we introduced it, almost twenty years ago. It has attained a position of importance in the medical equipment that was hardly dreamed of in those early days when comparatively little was known concerning its physiological action. Today its effect on most of the tissues is pretty well defined.

Adrenalin affects body tissues in a manner strikingly similar to the effect produced by stimulating the sympathetic nerve system. Thus, if the sympathetic nerves govern the contraction of certain unstriated muscle tissue, adrenalin, too, will contract it. If, on the other hand, the tissue in question is supplied with inhibitory impulses by this nerve system, adrenalin relaxes it.

These actions, however, are exerted neither through the medium of the sympathetic nerves nor directly upon the muscle fibres themselves. The receptive organs for these adrenalin impulses are the points of union of the sympathetic

nerves and the unstriated muscle fibres—the myoneural junctions.

Probably the most important action of adrenalin is stimulation of the muscular coats of the arterioles. At first there is acceleration of the pulse rate, but the rise in blood-pressure which results from vasoconstriction soon excites the vagus centre and as a consequence the heart-beat is slowed and strengthened. Besides this indirect vagus action, adrenalin stimulates the heart directly, thus producing more complete evacuation of the chambers. In large doses, however, adrenalin predisposes the heart to fibrillary contractions.

The stimulating action of adrenalin is exerted also on the dilator muscle of the iris (dilates the pupil); the muscular fibres of the uterus and vagina; the retractor muscle of the penis; the pyloric and ileocecal valves; the glycogenolytic function of the liver; the salivary glands and the glands of the mouth and the stomach.

Adrenalin relaxes the muscular walls of the esophagus, stomach and intestines. Also on the muscular coat of the bronchioles adrenalin has a relaxing effect, due probably to vagus stimulation.

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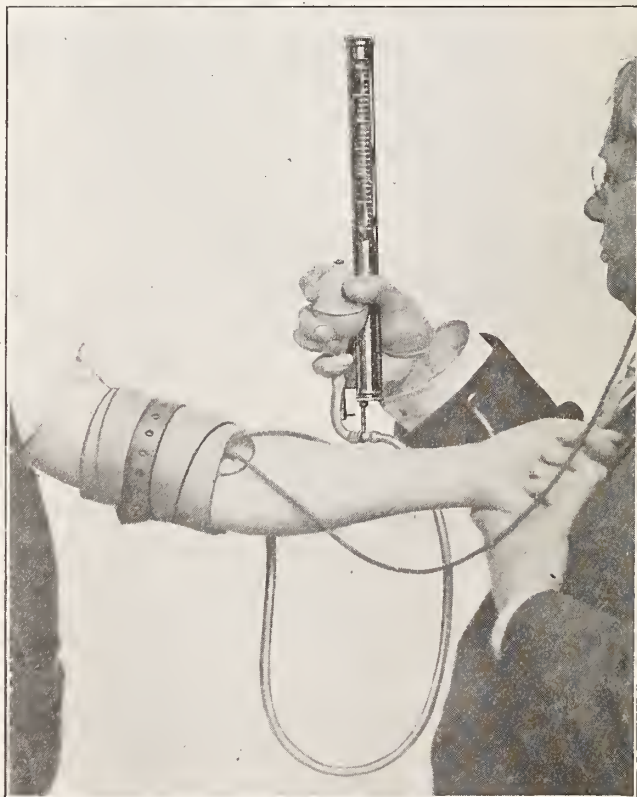
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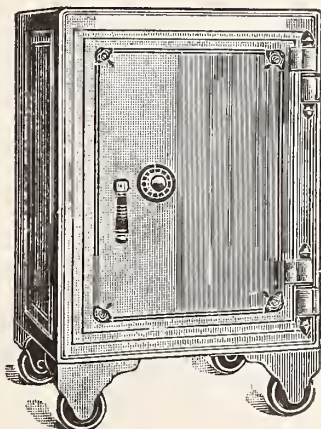
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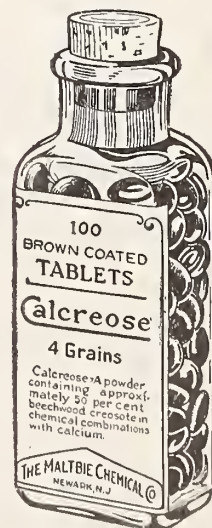
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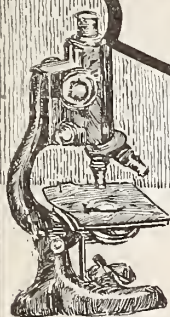
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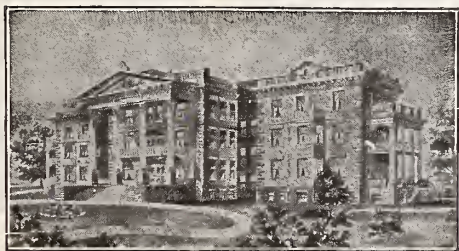
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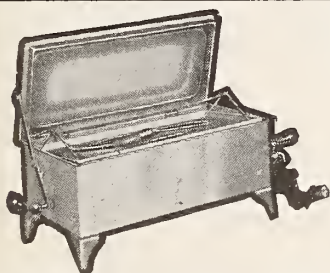
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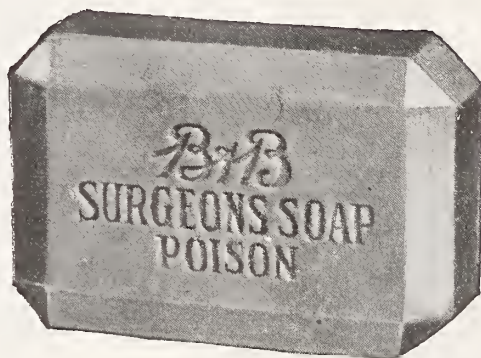
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Vol. XIX

GRAND RAPIDS, MICHIGAN, OCTOBER, 1920

No. 10

Original Articles

PROTECTIVE CHANGES IN THE OVIDUCT.*

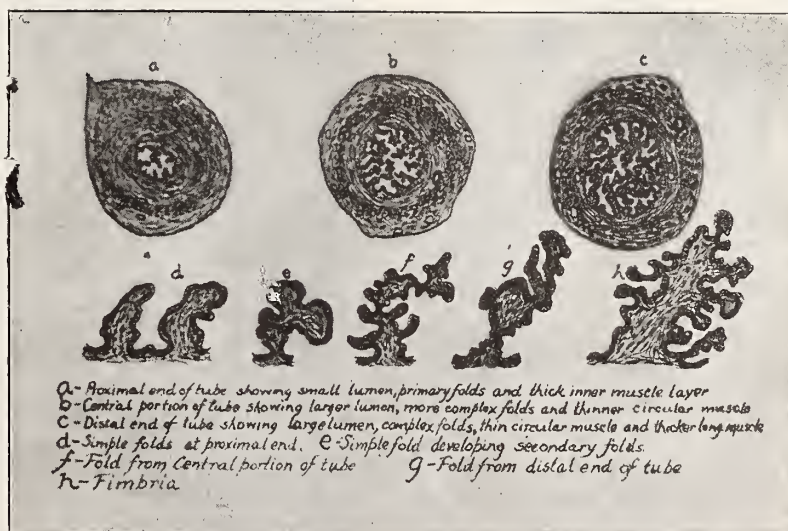
JAMES E. DAVIS, A.M., M.D.,
DETROIT, MICH.

The character of the specific function required of the uterine tubes involves a very efficient protection. A somatic function is always secondary to reproduction, and tubal pathology is a preferential process for the preservation of the open lumina and ostia.

Until puberty the embryonic tubal folds cause

many folds which are surrounded by a strong circular and collar-like layer of involuntary muscle bundles. The distal or abdominal ostium is of more complicated architecture because of its higher function.

The many compound folds within the base of the ampullar formation and the long grooved, projected mucosa to peritoneum construction, with its mesothelial stroma and longitudinal muscle retracting, contracting and relaxing structure provide for at least two forms of closure: one with and one without inclusion of the fimbriae. A physiological closure doubtless obtains when the reproductive cells are not



an efficient occlusion; after this period the ostia, controlled by specific muscle arrangement and enervated through ovarian and uterine connections or through the sympathetic connections from mucosa to serosa, may open or close, remain open or continue partly or wholly closed, as may best preserve the ultimate function of the organ. Interval constrictions so frequently observed may be imitative of the primary form of protection.

The proximal ostium is designedly only one or two mm. in diameter with a few simple pri-

demanding tubal function; and this closure is obtained by unison contraction of longitudinal and circular muscle fibers. The former, being relatively much more abundant than the latter, consequently are the controlling part of the closure mechanism.

A pathological closure involves the additional factors of hypertrophic and hyperplastic tubal wall with a sectional or complete inclusion of its entire structure. An old and thick fibrous peritoneal coat may limit expansion. The mucosal folds may be changed by lateral or end fusings, by extensive intra and inter infiltration processes, or by hypertrophic, hyperplastic and atrophic stromal changes. An

*From the Department of Pathology, Detroit College of Medicine and Surgery, Detroit, Michigan. Read at the Thirty-second Annual Meeting of the American Association of Obstetricians and Gynecologists, Cincinnati, Ohio, September 15-19, 1919.

endo- or pari-salpingitis may not specifically designate the anatomical distribution of the morbid changes. The fimbriae are retracted rather than inverted within the tubal lumen, for in the same plane and with the same relative base attachments may be seen rugae and fimbriae. The delicate mesothelial type of stroma in the fimbriae indicates the facility with which a diminution in size of this structure may take place.

The persistency of the lumen and the preservation of the epithelium are quite remarkable in the extensively deformed specimens used in this study. There was but little desquamation, and flattening of cell nuclei occurred only where the surrounding change was very severe. An exception to this condition is seen in the case of bichloride of mercury poisoning, where the only efficient protection

not associated with tubal pregnancy, signally beneficial for protection. The first essential of tissue repair, rest, is obtained by splinting against the ovary and uterus. The abdominal ostium in this manner becomes intimately adherent to a peritoneal surface. This position facilitates a decreased blood supply and atrophic changes.



2. Late Acute Streptococci and
Gonorrheal Salpingitis after Abortion.
Age 20 yrs.



Case 1.

possible was accomplished by a uniform destruction of the entire epithelium. The relative larger size and greater number of epithelial cells in the distal portion of the tube provide for a larger fluid production just where it is most needed for protection and propulsion of the germ cells. An excess of secretion, excited by pathogenic organisms, may exert a diluting power and also stimulate muscle contraction closure of ostium and muscle propulsion towards the proximal end of the tube.

The proximal ostium is a short transition from the uterus to the tubal structure. Its efficient long valve, constructed of strong muscle fibers and primary folds, is an interesting contrast to that of the ostium abdomale. It is a mistake to understand that the proximal ostium is a valve consisting of a few narrow muscle fibers. Trans-sections of the uterine cornu and first portions of the tube prove the extent of muscle in this ostium.

The outward, backward, downward and inward direction of the oviduct as found in the great majority of pathologic processes, is, if



Case II.

Thirty representative cases illustrating twenty-three types are reported and intensively studied to portray the correlation of morphological and histological tubal changes.

Case 1. Chronic Salpingitis, Chronic Peritonitis, Chronic Periovaritis, Streptococci and Gonococci Infection following Abortion and Gonorrhea.

Age of patient, 22 years. Married five years; two pregnancies, one normal and one induced

abortion. (Venereal Case Interned by the State.)

The gross specimen exhibits a massed tube and ovary. The cross section shows intimate adhesion of ovary and tube. The tubal wall is thickened and is evidently fibrous. The lumen is 2 mm. in diameter. The ovary shows multiple cyst formation, corpora albicans, and young corpora lutea.

Microscopic Examination: The tube is seen in full cross section at the left and in part at the right, adjoining the largest cyst. The explanation of this formation is that the tube has passed

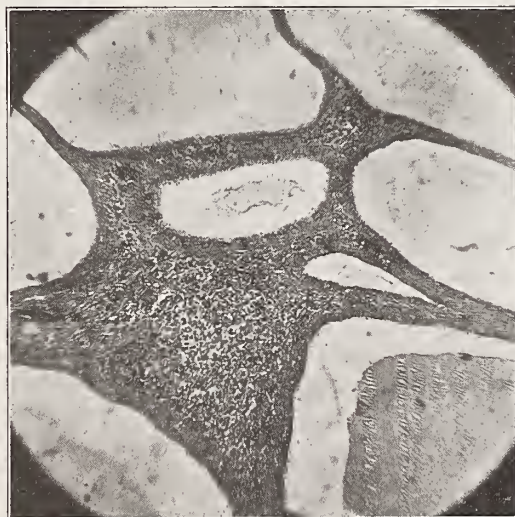
massed with but very few free end portions, giving a general picture which might be mistaken for glands. The basal portions of some of the plicae are narrowed, but the majority show broad bases. The lumen is partially closed by cellular debris consisting mostly of degenerating pus cells.

Case 2. Late Acute Streptococcic and Gonorrheal Salpingitis and Peritonitis, Two Weeks after Abortion, Following a Previous Gonorrheal Salpingitis and Ovaritis of Unknown Periodicity.

Age 20 years. Unmarried and has had one in-



-3- Chronic Gonorrheal Fibro-Cystic Pyosalpingitis. Age 46 yrs —



Case III.

outward, downward, and backward close to the upper surface of the ovary.

The pathological changes are—intimate massing of ovary and tube; focal lymphocytic infiltration of tubal mucosa; muscularis and serosa. The infiltration of the mucosa is very marked. There is only marginal infiltration of ovarian stroma. The ovary shows well preserved Graafian follicles of different sizes; the larger ones showing cystic degeneration. The peritoneal coat of the tube is thickened, edemic, and hyperemic. The muscularis cannot be easily defined as longitudinal and circular layers, and the muscle bundles are quite commonly separated by the edemic and infiltration changes. The plicae are extensively

complete abortion with sapremic infection. One full term child is living. Wassermann Reaction was positive.

The gross specimen exhibits a massed tube and ovary, a cross section of which shows a completely fibrosed tube and an almost complete cystic degeneration of the ovarian structures. The contents of the cysts show gelatinization.

Microscopic Examination: The ovary and tube are intimately massed. The ovarian histology shows the function of the ovary is still preserved, as evidenced by the Graafian follicles. The tubal wall as compared with Case 1 shows extensive peritoneal involvement with thick organizing purulent exudate on the surface. The

muscularis has less individual separation of muscle bundles, but relatively more pus cell infiltration. The plicae are densely infiltrated with pus cells and the inter-spaces are entirely filled with organizing pus. The lumen is obliterated, with the exception of a small area in the central part of the transsection.

Case 3. Right Gonorrheal Pyosalpingitis with Extensive Fibrosis and Multiple Medium-Sized Cyst Formations.

Age 46 years. Chief symptom—dull pain in iliac region.

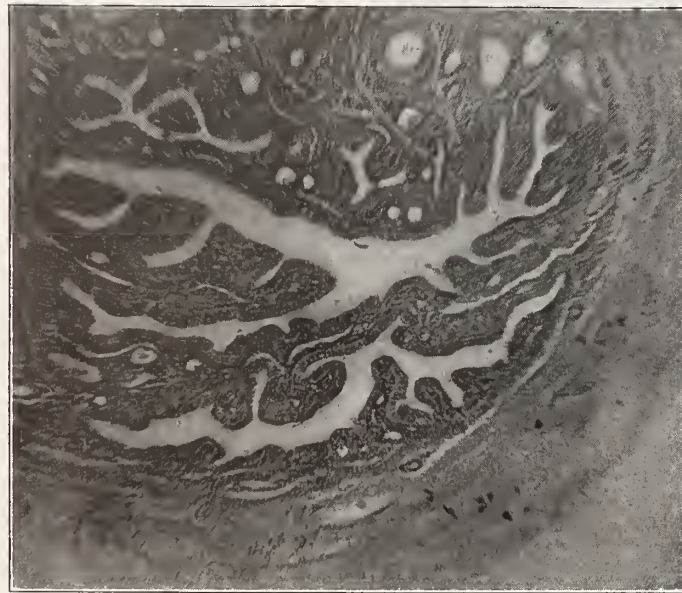
The gross specimen exhibits a very irregular outline with numerous nodulations, as well as

the histology of the tubal elements. In Section (a) the longitudinal muscle fibers can be identified, though they have undergone marked hyaline changes. The circular layer cannot be identified. The fimbriae show a distinct massing, but the units are very much longer and narrower than are those of plicae developed within the tube. There is small round celled infiltration of the stroma of the fimbriae and also some focal aggregations of the same type of cells. In portions of the tubal wall there is dense diffuse infiltration of small round cells of various types, polymorphonuclears, plasma cells and lymphocytes.

In Section (b) the plicae are low and thick,



4. Slight Inflammatory Change - Tubes Ovaries and Fibroid Uterus - Age 48 yrs.



Case IV.

numerous cysts, upon the peripheral surface. The length is 9 cm. and the diameter is 4 cm. The longitudinal section shows two strictures near the center, each stricture being 1 cm. thick. The distal portion of the tube still retains a patent lumen which is 1.5 cm. in diameter.

Microscopic Examination:

Section (a) shows inverted tubal fimbriae.

Section (b) is taken from the distal end beyond the area of inverted fimbriae.

Section (c) is taken from the proximal end of the tube.

A comparison of the three sections shows the characteristic picture of the relative changes in

dome-shaped, densely massed and show marked increase of fibrous tissue, in places disposed in whorl-like formation. The muscularis is of greater thickness and shows extensive replacement by connective tissue.

In Section (c) the plicae are larger but fewer in number, and show diffuse infiltration of small round cells with a greater proportion of lymphocytes than in the other sections. The muscularis shows heavier muscle bundles and a greater relative thickness and relatively less degeneration. There is extensive exfoliation of epithelium.

Case 4. Mild Non-Specific Inflammatory Changes in Fallopian Tubes and Ovaries, with Fibroid Tumors of the Uterus.

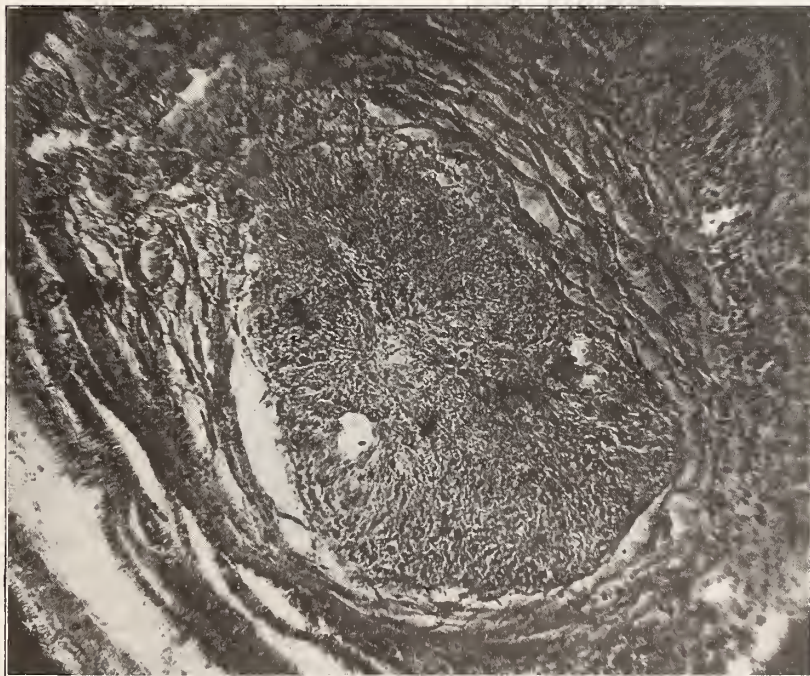
Age 48 years. Chief symptoms: Hemorrhages and pain.

The gross specimen consists of uterus, Fallopian tubes and ovaries. The uterus, which is markedly fibrous, is somewhat larger than a large orange. One of the ovaries is markedly cystic and has disposed upon its surface considerable fibrous tissue. The Fallopian tube adjoining this ovary shows interval constrictions, connective tissue increase, and slight hypertrophy of fim-

ate degree, characterized by some lymph exudation and mononuclear infiltration. The muscularis consists of relatively few muscle bundles, and is markedly cavernous from blood and lymph vessels. The submucosa is narrow and is impinged upon the cavernous tissue. The blood-vessel walls are generally thickened, and the lymph vessels are dilated. The mucosa exhibits rugae that are not greatly changed, except for an increase of stroma and cavernous



5 Tubercular Infection Oviducts Age 48 yrs



Case V.

brae. The other ovary is smaller and the tube is intimately attached to the hilum, the distal end of the tube being connected by a definite, continuous fibrous union with the ovary. The fimbriated portion is divided into two parts by a fibrous sealing of the ostium. The fimbriae are hypertrophic and hyperplastic, and there are two cysts developed in common with the fimbriae, one of which is 1 cm. by .5 cm.

Microscopic Examination: Section (a). The serosa exhibits inflammatory changes of moder-

ate degree, characterized by some lymph exudation and mononuclear infiltration. The muscularis consists of relatively few muscle bundles, and is markedly cavernous from blood and lymph vessels. The submucosa is narrow and is impinged upon the cavernous tissue. The blood-vessel walls are generally thickened, and the lymph vessels are dilated. The mucosa exhibits rugae that are not greatly changed, except for an increase of stroma and cavernous

formation therein. There is no fusing of rugae, and there is no inversion of fimbriae. The essential change is one of passive congestion, with consequent moderate connective tissue increase. Through one plane there is a slight peri-salpingitis.

Section (b). The tissue consists entirely of ovarian stroma, except a narrow strip of muscle tissue. The structure shows compression changes and early atrophy and also slight diffuse mononuclear infiltration. The general form is such

as to indicate that this tissue in part forms the wall of a cyst.

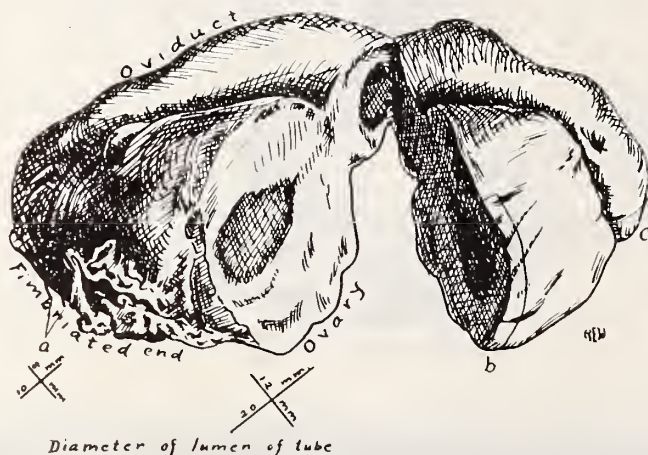
Section (c). The serosa shows slight inflammatory change. This is seen also in the longitudinal muscle layer which can be divided into two parts. The circular muscle layer can be identified. The entire wall is markedly vascular and shows slight mononuclear infiltration. The mucosa shows no change, except very moderate hypertrophy and hyperplasia. There is no inversion of fimbriae and no fusing of rugae.

Case 5. Bilateral Tubercular Salpingitis. Case of Dr. Hayd's, Buffalo, New York.

Age 26 years. Chief symptoms: Backache.

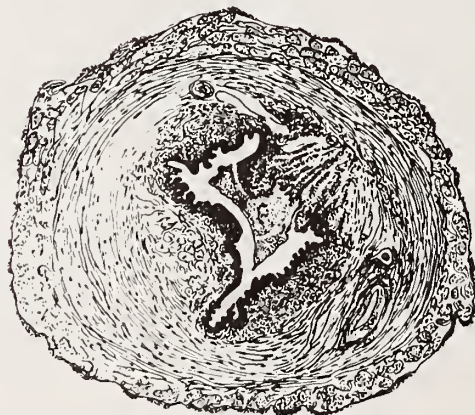
er diameter and 9 cm. in its shorter diameter. The wall averages 1.5 mm. in thickness. The bowl formation is filled solidly with pseudomucin.

Microscopic Examination: Section (a). The serosa and muscularis show marked inflammatory changes from tubercular infection. The classical picture of tubercles of various ages accompanied by giant cells and followed by local fibrous change as a tracery of the healed tubercles, and the diffuse mononuclear infiltration make very complete evidence of this process. The condition is older in Section (a) than that seen in the sections from other positions, there



6 Late Subacute Endo- and Peri-Pyosalpingitis and Ovaritis

Mixed Infection Two Years Duration Age 40 yrs



Case VI.

Patient otherwise in good health. (Full description of the case is given by Dr. Hayd on page 53 of the Transactions of the Association for 1918).

The gross specimen consists of the right and left Fallopian tubes. The smaller tube is 14 cm. long by 5 cm. in cross diameter, and it is enlarged so as to make a hunter's horn formation. The cross diameter of the proximal end is 2 cm. and the wall averages 1.5 mm. in thickness.

The larger tube is an inverted pipe formation. The stem portion is 9 cm. long; the proximal diameter is 1.3 cm. and the distal diameter is 3.5 cm. The bowl portion is 13 cm. in its long-

being more fibrosis and few giant cells. The tubercles are mostly old and healed. This, however, applies more strictly to the serosa and muscularis. The process as seen in the mucosa is more recent.

Section (b) offers an interesting contrast to Section (a) in that only local aggregations of leucocytes are seen in the muscularis and serosa. Upon the mucosal side there is a deposition of caseated material. In the submucosa there is a marked diffuse mononuclear infiltration, with some very young tubercles.

Section (c) exhibits a thinner tubal wall than that of (a) or (b) and the structures show mark-

ed pressure changes of atrophy and distension. There is also marked hyaline degeneration in portions of the wall. The submucosa has been almost entirely obliterated. The mucosa shows a contrast with sections (a) and (b) by lateral fusing of the rugae and also end-to-end fusing. Within the spaces bounded by epithelium there is much exudative material. This has undergone organization and in very many places is invaded by tubercle formations. The stroma in many places is hypertrophic and hyperplastic and contains multiple young tubercles. For the most part the epithelium is well preserved.

Section (d). The typical architecture of the tubal wall isthmus is seen. The wall shows both focal and diffuse mononuclear cell infiltration, and an occasional young tubercle. The mucosa has extensive fusing of rugae, forming a solid mass in the greater part of the lumen. In this tissue there are found caseated material and an occasional young tubercle.

Case 6. Bilateral Late Sub-Acute Endo- and Peri-Salpingitis with Pyo- and Cystic Ovaritis, Mixed Infection.

Age, 40 years. Duration of Condition, two years. Chief Symptom, pain in lower abdomen.

The gross specimen shows a massed Fallopian tube and ovary with entire obliteration of parovarian tissue. The tube partially surrounds the upper surface of the ovary.

Microscopic Examination: Section (a). The tubal wall is greatly thickened and is diffusely infiltrated with mononuclear and polynuclear cells, the former being more numerous. Many of the polynuclears are plasma cells. The mucosa exhibits a lateral and end-to-end fusing of rugae, also hypertrophy and hyperplasia, which is most marked in the stromal portions. The rugae are partially fimbriated types; these, however, are few in number. The lumen is not obliterated and contains a large quantity of debris, which consists largely of pus cells.

Section (b). This section shows essentially the same changes as observed in Section (a), excepting that peri ovarian and pariovarian tissue is involved.

Section (c). This section retains the essential histological architecture of the proximal end of the tube. The mucosal folds are few in number, and the epithelium is atrophic and has undergone some hyaline change. The lumen is occupied by organizing cellular debris in which are large numbers of pus cells. This condition illustrates changes following mixed infection, gonorrheal and streptococcic in type, and the entire adnexa is involved in a chronic inflammatory process.

Case 7. Early Chronic Endo- and Peri-Salpingitis. Mixed Infection of Three Years Duration.

Age 33 years. Chief Symptom was pain in the pelvic region.

The gross examination shows a specimen of an enlarged Fallopian tube with irregular lumen which is partially filled with coagulated pus. The wall shows a distinctly marked fibrous tissue increase. This tissue is disposed more or less in an irregular way, in places appearing as bands,

and is intimately associated with organizing purulent material. The fimbriae are completely massed and partially inverted, and the edges are but slightly frayed.

Microscopic Examination: This specimen exhibits the same type of inflammatory change as is seen in Case 6, but the inflammatory process is of longer duration. The history shows a change extending over a period of three years, while Case 6 covers a period of two years' duration. The histologic changes are essentially the same in both cases, except that in No. 7 the deformity is greater from the extensive connective tissue increase. Not only is this seen in the muscularis, but it also occurs extensively in the mucosa. In Section (c) the serosa is markedly thickened and has undergone fibrous and hyaline changes, indicating a severe chronic peritonitis. The infiltration process is widely diffused, and the infiltrated cells are of mixed types, pus cells largely predominating upon the mucosal surface.

Case 8. Tubal Pregnancy and Chronic Salpingitis. Embryo in Distal End of Tube.



8 Tubal Pregnancy and Chronic Salpingitis Age 29 yrs
Case VIII.

Age 29 years. Chief symptom, abdominal pain.

The gross specimen consists of an ovary and Fallopian tube. The distal end of the tube contains a small foetus, (12 mm.) The proximal end of the tube is fibrous and markedly thickened to the extent of 2 cm. due to old inflammatory changes. The portion of the wall of the tube containing the foetus varies in thickness from 1 mm. to between 1.5 cm. and 2 cm., the thicker diameters being at the distal and proximal ends of the dilated portion.

Microscopic Examination: The sections from this case illustrate a tubal pregnancy showing unmistakable evidence of chronic parosalpingitis. At different places in the muscularis there are aggregations of mononuclear cells, chiefly lymphocytic in type. The muscle bundles show atrophy and hyaline change. Upon the mucosal side of the tubal wall there are remnants of rugae and a laminated blood clot with enmeshed chorionic villi and amnion.

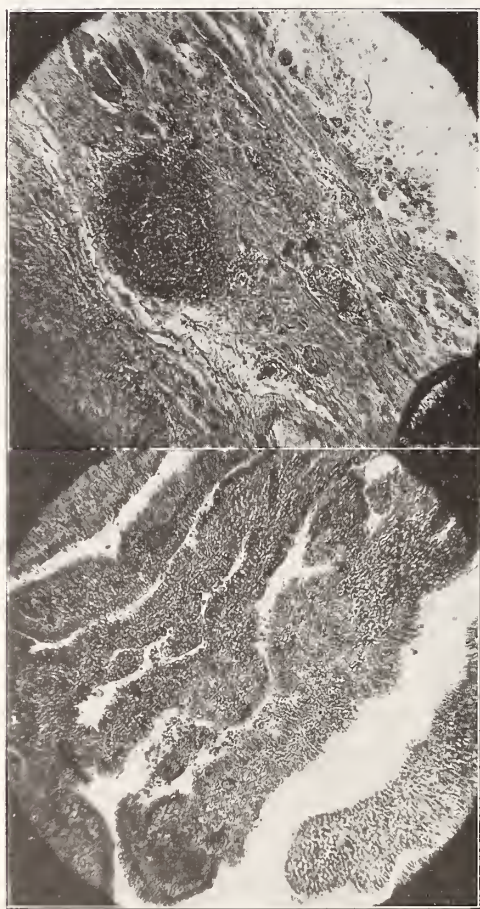
Case 9. Unilateral Pyosalpingitis, Marked Fibrous Thickening of Wall, with Areas of Hemorrhage. A Probable Unruptured Tubal Pregnancy.

Age 24 years. Chief symptoms, pain and abdominal distension.

The gross specimen exhibits a Fallopian tube showing marked fibrous change in the proximal



9. Chronic Pyosalpingitis and Old Hemorrhage - Age 24 yrs.



Case IX.

portion and a cystic enlargement of the distal end. The size of the cyst is 6 cm. in the longer diameter and 5 cm. in the shorter diameter. The shape is oval, and the wall varies in thickness from 3 to 10 mm.

Microscopic Examination: There is a peculiar pod-like formation of the distal portion of the tube with purulent exudate upon the inner wall and numerous areas in the walls showing old hemorrhage.

Section (a) exhibits a diffuse small round cell infiltration disposed somewhat in narrow zones through the muscularis. There are also areas of red blood cell extravasation disposed in the same manner. The submucosa is densely infiltrated with pus cells and contains zones of mark-

ed connective tissue increase. In these zones of connective tissue there are localized aggregations of blood pigment.

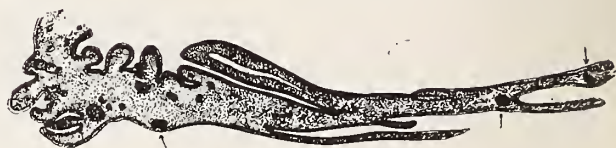
Section (b) has a thickened and infiltrated serosa which is moderately hyperemic. The muscularis shows three distinct layers. In each there is a marked connective tissue increase and focal infiltration. The submucosa contains a large number of eosinophiles. The mucosa shows deformity, hypertrophy and hyperplasia of the rugae and also a moderate diffuse and focal small round cell infiltration in the stroma of the rugae. There is some lateral fusing of the rugae.

Case 10. Chronic Salpingitis with Calcification and Tubal Pregnancy and Ovarian Cyst.

The gross specimen consists of a tubal pregnancy and multiple cystic degeneration of the ovary. The Fallopian tubes is distended to a diameter of 6 cm. by an organized blood clot. The tubal wall is .5 mm. to 1 mm. in thickness. The cyst wall contiguous to the tube is intact and the cyst lying between the tube and the ovary is 5 cm. in diameter. The second cyst, within the



10 - Chronic Salpingitis with Calcification and Pregnancy, and Cystic Ovary



SECTION OF FIMBRIATED END OF TUBE SHOWS:
1. FIMBRIAE
2. FLATTENED RUGAE
3. PIECES OF CALCIUM DEPOSIT (INDICATED)



10. a - SECTION SHOWS
1. FLATTENED RUGAE
2. THICKENING OF EPITHELIUM

Case X.

ovary, is 17 mm. in diameter and the distended rim of the ovary is 1 cm. in thickness. The ovary is disposed so as to lie directly below the two cysts, which are directly below the tube. The fimbriated end of the tube shows an almost complete retraction within the lumen of the tube.

Microscopic Examination: Section (a) illustrates a flattened condition of the rugae which are lying in the long diameter parallel with the tubal wall. A few partially inverted fimbriae are observed. These are typically elongated and contain calcium deposits and considerable blood pigment. The stroma is infiltrated with plasma cells and lymphocytes.



-11- Hydrosalpinx -



Case XI.

Case 11. Hydrosalpinx, showing Rugae in the Process of Obliteration.

The gross specimen is that of a rather small tube, with fibrous wall at the proximal end. The distal end is enlarged by cystic degeneration so as to make a modified pipe form. The wall of the tube has been dilated so as to be very thin.

Microscopic Examination: Case 11 is one of hydrosalpinx, in which there is the characteristic deformity in the gross specimen.

Section (a) exhibits a characteristic dilation of tubal walls and consequent enlargement of the lumen, and a typical flattening of rugae into a parallel position with the long axis of the wall. The folds show marked narrowing and apparent elongation with both lateral and end-to-end fusings, giving an ornamental fence picture. The changes in the wall are chiefly distension, pro-

ducing a pressure atrophy and a hyaline degeneration.

Case 12. Receding Chronic Gonorrheal Endo-Salpingitis, with Complete Protection of Peritoneum by the Abdominal Ostium.

Age 24 years. Duration of condition, five years. Chief symptoms, recurrent and severe pain in pelvis and abdomen.

The gross specimen consists of a Fallopian tube with clubbed distal end. The fimbriae have been completely inverted, and on longitudinal section no trace of the fimbriated portion is seen. The cross section shows a lumen almost obliterated. A large part of the diameter of the tube is occupied by organizing pus.

Microscopic Examination: Case 12 is a typical gonorrheal salpingitis with complete protective closure of the external ostium, with fimbriae entirely inverted. The resistance offered against leakage of tubal contents is shown adequately by the knob-like enlargement and complete smooth surface sealing of the ostium.

Section (a) shows focal infiltrations of mononuclear cells in the tubal wall and thickening by connective tissue hyperplasia. The mucosa shows two types of rugae, one unusually long and typical of the fimbriated portion, and the other shorter and typical of the enclosed mucosa. The folds are markedly hypertrophied, and are densely infiltrated with mononuclear cells. Within the open spaces of the lumen there is considerable cellular debris.

Section (b) differs from Section (a) in that there is a more diffuse infiltration of the muscularis by polymorphonuclear cells, many of which are eosinophiles. The rugae are in marked contrast with the forms that prevail in hydrosalpinx. Here they are rather short and broad, particularly across the distal end portions. The lateral fusing is extensive.

Case 13. Tubal Pregnancy with Chronic Infection and Infected Corpus Luteum.

Age 29 years.

The gross specimen includes an ovary and Fallopian tube. The ovary exhibits an extruded corpus luteum, 2 by 2.5 cm. in size, with a wall averaging 3.5 mm. in thickness. The cavity is 12 mm. by 18 mm. and represents a typical cyst. The Fallopian tube has a ruptured wall with organized blood clot in situ, the rupture having taken place proximal to the mid-point of the tube. Distal to the mid-point a small cyst is seen upon the under side, and the fimbriae are seen to be closely drawn against the ostium. On section a small foetus was observed within the lumen.

Microscopic Examination. Section (a) shows a typical corpus luteum of pregnancy with an extensive infection. The infection is revealed in multiple foci, eight being found in this section. In each there are typical pus cell debris and hemolyzed red blood cells.

Section (b) shows a wall with extensive connective tissue hyperplasia. The mucosa exhibits two types of folds, one long and narrow, typical of the fimbriae and the other type of branched folds found in the distal part of the tube. The

tubal wall is greatly distended, and the fimbriae are flattened against the inner surface of the wall by the pressure from an organizing blood clot within the lumen. The blood clot, mucosa and submucosa are infiltrated with pus cells.

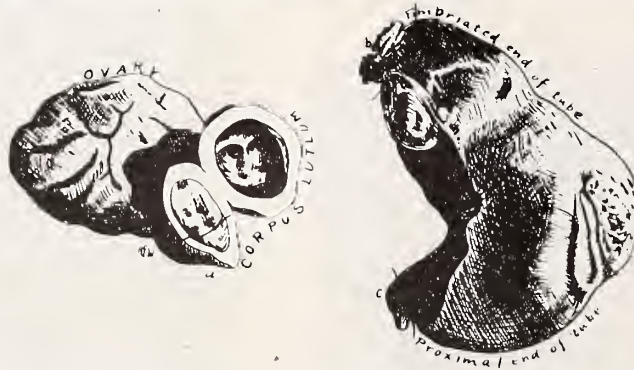
Case 14. Chronic Bilateral Endo- and Peri-Salpingitis of Five Years' Duration. Mixed Infection. Right Tube Infection Receding.

tube is small and distinctly fibrous. The second tube shows relatively less enlargement, but is closely massed with the ovary, the distal end of the tube curving intimately about the ovary.

Microscopic Examination: Sections (a) and (b) exhibit a greatly thickened wall and marked connective tissue increase. Relatively little muscular tissue is preserved. The wall has been ex-



Case XII.



13 Tubal Pregnancy with Chronic Infection and Infected Corpus Luteum
Age 29 yrs



Case XIII.

Age 23 years. Duration of condition, 5 years. Chief Symptom, pain in abdomen and in lower left iliac region.

The gross specimen exhibits both Fallopian tubes, one of which shows marked thickening of the distal two-thirds which is enlarged to a diameter of 15 mm. The fimbriae have been completely inverted, and the proximal end of the

tensively infiltrated, both focally and diffusely, with small round cells; the mononuclear type prevailing. The mucosal folds are much enlarged and extensively fused and infiltrated with mixed cell types. A small number of inverted fimbriae are observed.

Section (c) shows a markedly thickened peritoneal layer, and the longitudinal portion of the

muscularis is more than half replaced by connective tissue. Through the entire muscularis there are numerous focal infections of mononuclear cells. The mucosal folds are twelve in number and are hypertrophic and hyperplastic. There is no fusing of the folds.

Section (d) shows the same essential changes observed in the fimbriated end of the left tube, except that there is a greater connective tissue increase, both in the wall and in the plicae.

Section (e) shows more extensive fusing of rugae and longitudinal flattening of areas surrounded by epithelium and adjoining the submucosa, this being indicative of long continued pressure in an outward direction.

Age 42 years. Duration of condition, one year. Chief symptom, abdominal pain.

The gross specimen shows a Fallopian tube and ovary, most intimately massed. The tubal wall has become a part of the wall of a cyst which includes also in its wall, portions of the ovary. Right-angle stricture bands are seen in the specimen, one of these being particularly prominent. The fimbriae of the tube show bipartate massing with the ostium which is firmly closed, leaving considerable of the fimbriated tissue extruding.

Microscopic Examination: Section (a). The tubal wall shows an occasional focal mononuclear infiltration. The blood vessels show some



14. Chronic Bilateral Endo- and Peri-Salpingitis.
Mixed Infection Older Process in Right Tube.
Five Years Duration. Age 43 yrs.



Case XIV.

Section (f) shows relatively much less change of muscle tissue, there being a relatively small amount of connective tissue in the walls. The infection is much less extensive. The lumen is larger and the folds are sixteen in number, these being longer than those in Section (c) of the right tube, which corresponds to the greater distance of this section from the ostium.

Case 15. Chronic Healed Gonorrheal Salpingitis with Partially Inverted Fimbriae and Cyst Formation with Corpus Luteum Involved in the Immediate Portion of the Cyst Wall and the Oviduct in the Remoter Portion of the Cyst Wall.

dilatation. The mucosa includes both fimbriae and distal end rugae. The epithelium is well preserved, and the folds show moderate hypertrophy and hyperplasia and slight mononuclear infiltration.

Section (b) consists entirely of connective tissue, well supplied with blood vessels. On one side there are typical corpus luteum cells. There is no active change taking place in the tissue.

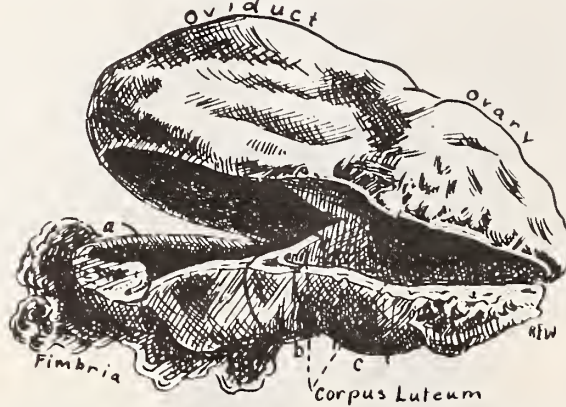
Section (c) is typical parovarian tissue showing no change other than moderate hypertrophy and dilatation of blood vessels, with an edging of luteal tissue.

Case 16. Chronic Gonorrheal Salpingitis and Ovaritis.

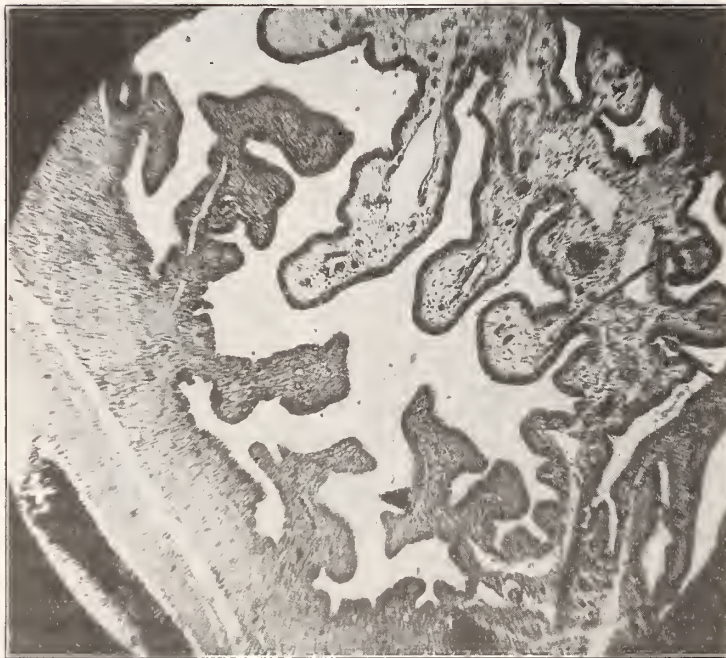
The gross examination shows two specimens from the same case. In each there is intimate massing of the tube and ovary. In neither specimen can the fimbriated portion of the tube be identified. In each the distal end of the tube has curved about the ovary. Both tubes and ovaries show pyogenic changes and marked cystic degeneration. The deformity shown is typical of this condition.

lateral and end-to-end fusing. The lumen contains a large amount of pus cell debris.

Section (c). The serosa is very compact and markedly hyaline. The muscularis is thick and shows some connective tissue hyperplasia and focal infiltration of areas by small round cells. The mucosa has sixteen folds, roughly resembling clover leaves. The stroma is infiltrated with small round cells, and the lumen contains pus cell debris.



-15-Healed Chronic Gonorrheal Salpingitis and Cystic Degeneration of Ovary. Age - 42 yrs.



Case XV.

Microscopic Examination: Section (a) shows a thin wall of deformed ovarian tissue within which is a large mass of cellular debris, consisting largely of degenerating pus cells.

Section (b). The peritoneal coat is greatly thickened and infiltrated with small round cells of mixed types. The muscularis has marked hyaline changes, extensive loss of muscle nuclei, and infiltration with small round cells. The mucosa exhibits many dome shaped folds which show

Section (d). This section contains both tubal and ovarian structures. In the ovarian tissue there is a large corpus luteum. The tubal wall shows considerable connective tissue increase and the mucosal folds are few in number and are either flattened and atrophic or broad and irregularly dome-shaped.

Section (e). This section shows the same essential changes, except that there is considerable fatty infiltration in the tubal wall, the mucosal

folds are much longer, and the hyperplastic change in the stroma is more marked.

Case 17. Double Hydrosalpinx of Moderate Enlargement with Completely Sealed Ostia, and a Well Advanced Carcinoma of the Cervix Uteri.

Age 39 years.

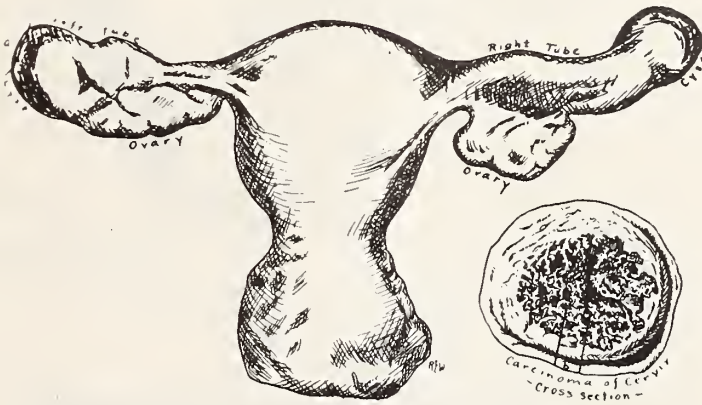
The gross specimen consists of the uterus, with Fallopian tubes and ovaries. Both tubes exhibit closed fimbriated ends, with no trace of fimbriae. One tube is intimately massed with the ovary, and both tubes show the same type of cystic change. The cervix uteri shows a typical carcinomatous degeneration.

Microscopic Examination: Section (a) illustrates a typical tubal wall in hydrosalpinx, with

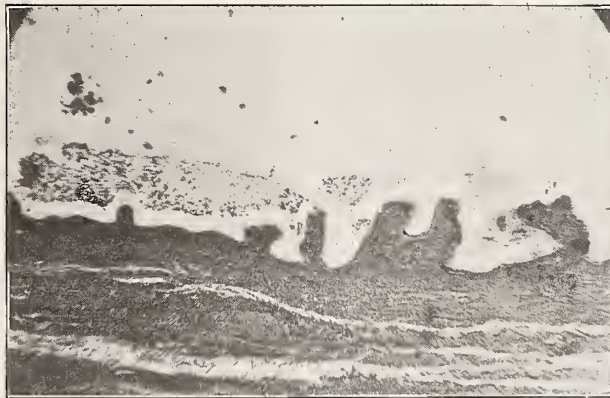
end, with gradual enlargement towards the distal portion. The tube has been occluded by inflammatory change, with cyst formation and massing of the ovary. The midportion of the tubal wall shows a thickening of 4 mm. and the lumen is filled with organizing pus.

Microscopic Examination: Section (a) consists entirely of ovarian tissue, in which are Graafian follicles undergoing cystic degeneration. There is also one small hematoma.

Section (b) shows both ovarian and tubal structures. The part of the cyst wall shown in the section is constructed of ovarian tissue. The tubal wall is diffusely infiltrated with small round cells of mixed types. The mucosa shows long,



-17 Bilateral Hydrosalpinx with Carcinoma of Cervix Age 39 yrs



Case XVII.

marked evidence of distension, the blood vessel walls being elongated and the muscle bundles narrowed, many nuclei being either destroyed or are very small and compressed. The mucosa shows destruction of rugae, or they are much diminished in height and general dimensions.

Section (b) shows extensive infiltration with epithelial cell new growth tissue of squamous type in medullary formation, giving a typical picture of medullary squamous-celled carcinoma.

Case 18. Infected Tubo-Ovarian Cyst, and Early Chronic Endo- and Peri-Salpingitis.

Age 17 years. Unmarried. Never pregnant. Interned for venereal disease by the State. Exposure to venereal infection began 15 months prior to operation.

The gross specimen consists of a Fallopian tube exhibiting fibrous thickening of its proximal

hypertrophic, hyperplastic folds with frequent narrow pedicled bases. The stroma is densely infiltrated with small round cells. The lumen contains a large mass of pus-cell debris. The cellular infiltration process extends into the ovarian tissue.

Section (c) shows a much thickened wall with marked increase of fibrous tissue. There is a diffuse small round cell infiltration in the circular muscle layer and a focal infiltration of the same type of cells in the longitudinal muscle layer. The stroma of the folds is markedly edemic and infiltrated with pus cells. The epithelium shows extensive desquamation.

Case 19. Acute Double Gonorrheal Salpingitis, Ovaritis of Left Ovary with Left Tube Almost Completely surrounding the Ovary, and extensive pyogenic exudate in the pelvic cavity.

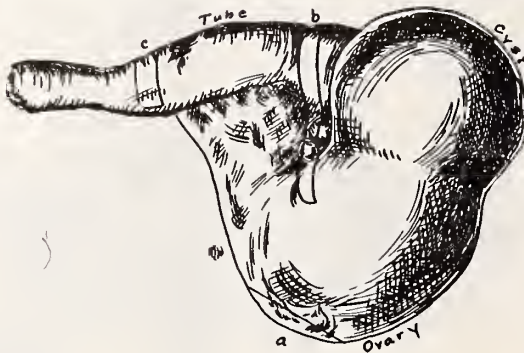
Age, 38 years. Married. Has had five children and one miscarriage. Chief symptoms, pain in lower lumbar region and pelvis, yellow vaginal discharge which began 5 years previous. Smears were positive for gonococci.

The gross specimen consists of both tubes and ovaries from a case of chronic gonorrheal infection. The tubes and ovaries show intimate massing and gradual enlargement of the tubes from the proximal to the distal ends. Both tubes are filled with thick purulent material, and in both the fimbriated portions show complete in-

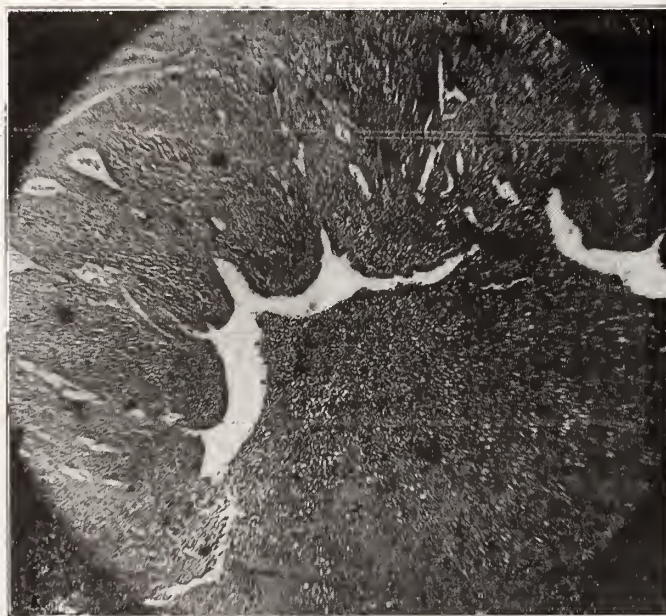
ward dome shapes. The lumen is filled with degenerating pus cells.

Section (c) exhibits the same changes as seen in the right tube, except that the peritoneal surface is densely thickened by a purulent exudate. The mucosal portion shows deformed folds, many of which are much flattened and extensively fused. There is marked hyperemia and extensive red blood-cell extravasation. The lumen contains a large mass of pus. There is active exfoliation of epithelium.

Section (d) consists of ovarian and tubal tis-



-18- Infected Tubo-Ovarian Cyst and Early Chronic Endo and Peri-Salpingitis. 15 months Duration. Age 17 yrs.



Case XVIII.

version and complete sealing over of the peritoneal surface.

Microscopic Examination: Section (a) shows an atrophic thin wall infiltrated with small round cells. The rugae are diminished in number, and many are short and dome-shaped. The stroma is densely infiltrated with small round cells. The lumen contains a large mass of degenerated pus cells.

Section (b) The tubal wall is diffusely infiltrated with small round cells, the majority of which are eosinophiles. The muscle has been extensively replaced by connective tissue. The mucosa shows a small number of folds which tend to-

sue, two transsections of the tube being included. There is intimate fusing of tubal and ovarian tissues, the pus-cell infiltration invading both types of tissue, the tubal tissue being more extensively involved. The rugae are greatly enlarged and the end portions rounded. The lumen contains a large amount of pus.

Case 20. Receding Chronic Salpingitis.

The gross specimen is a Fallopian tube of moderate size showing gradual enlargement of the tube toward the distal end, and an enlarged cyst of Morgagni. The ostium is not tightly closed, but the fimbriae are almost completely inverted. The companion tube showed complete inversion



19. Acute Gonorrheal Salpingitis and
Severe Pelvic Peritonitis. Age 39 yrs.

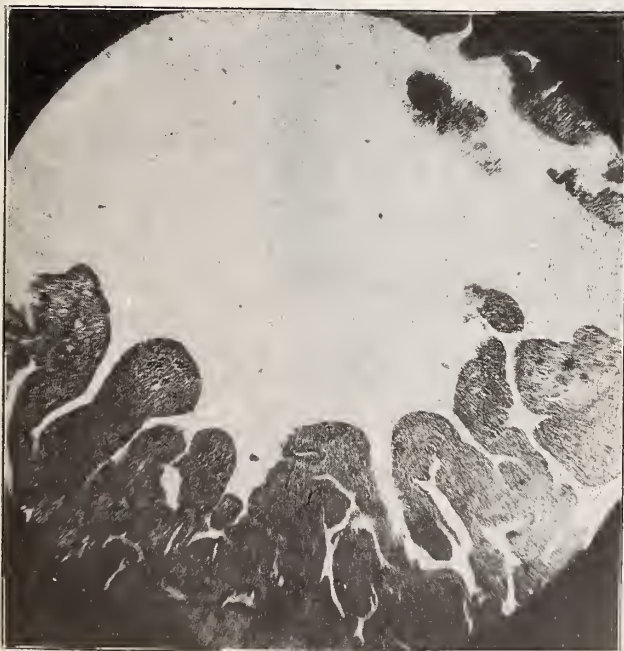
Case XIX.

of the fimbriae and complete sealing of the peritoneal portion of the ostium.

Microscopic Examination: Section (a) The peritoneal surface exhibits an occasional lymph node and the outer muscularis shows aggregations of lymph cells. There is connective tissue



20. Receding Chronic Salpingitis



Case XX.

replacement of the muscle bundles. The rugae are hypertrophic and hyperplastic, and have broad bases and rounded end-portions. There is practically no lateral fusing, and almost no desquamation of the epithelium. The mucosa shows a diffuse infiltration of small round cells, mostly mononuclears. At the fimbriated end there is a hypertrophied cyst of Morgagni.

Case 21. Chronic Pyo-Salpingitis and Extensive Ovaritis, with Early Cystic Degeneration of the Ovary, and Fusion of a Calcified Appendix with the Distal End of the Tube.

Age, 32 years. Chief symptoms, abdominal pain. Operation was Appendectomy, removal of Right Ovary and Tube, removal of Fibro-Myoma of the Uterus.

The gross specimen shows a Fallopian tube and ovary illustrating complete infolding of the distal portion of the tube with massed ovarian structures, the proximal and distal portions of the tube being within 1 mm. of each other. Massed fimbriae are observed which have become hypertrophied, and which are pinched by the tightly-closed ostium.

Microscopic Examination: Section (a) The tubal wall has multiple foci of small round-cell infiltration, and also some diffuse infiltration of the same type, the cells being mononuclears, of which the majority are plasma cells. The lumen of the tube is wanting. In the position of the abdominal ostium there is a portion of the appendix vermiformis, the mucosal part of which is undergoing calcification.

Section (b) shows a greatly dilated tubal wall with hyaline change in the muscle fibers and also considerable atrophy of the same, and moderate infiltration with small round cells, many of these being eosinophiles. The mucosa shows marked deformity of the folds, which have both broad and narrow bases and greatly enlarged end portions. The folds are greatly hypertrophied and are diffusely infiltrated with mononuclear cells. The lumen is filled with pus-cell debris.

Section (c) consists entirely of ovarian tissue which is infiltrated in certain portions with small round cells of mixed types. On one side is a large infected Graafian follicle. There are numerous well preserved Graafian follicles. Marked dilation of blood vessels is observed.

Section (d) shows focal infiltration in the tubal wall, connective tissue increase, and marked flattening of rugae. The lumen contains considerable pus cell debris.

Case 22. Late Acute Gonorrheal and Streptococcic Salpingitis, and Severe Peritonitis with Exacerbation due to abortion one month previous to operation.

Age, 16 years. Married two years, pregnant once, with abortion at 2 months. Interned for venereal disease.

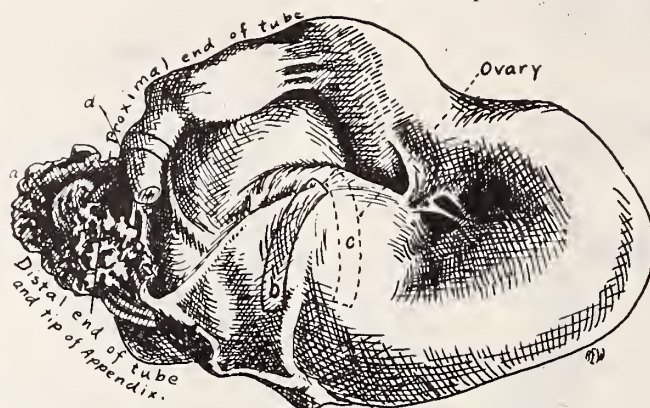
The gross specimen exhibits partial infolding of the fimbriated end of the tube, and massing of the ovary. The fimbriae have disappeared and the proximal end of the tube is distinctly fibrous. The companion tube shows gradual enlargement toward the proximal end, and almost complete inversion of the fimbriae.

Microscopic Examination: Section (a) The peritoneum is greatly thickened and diffusely infiltrated with small round cells, a large number of which are of the plasma type. There is extensive red blood-cell extravasation and considerable formation of young connective tissue. The blood vessels are moderately hyperemic. The rugae are hypertrophied and show rather extensive lateral fusing. The stroma is densely infiltrated with pus cells, and the lumen is marked-

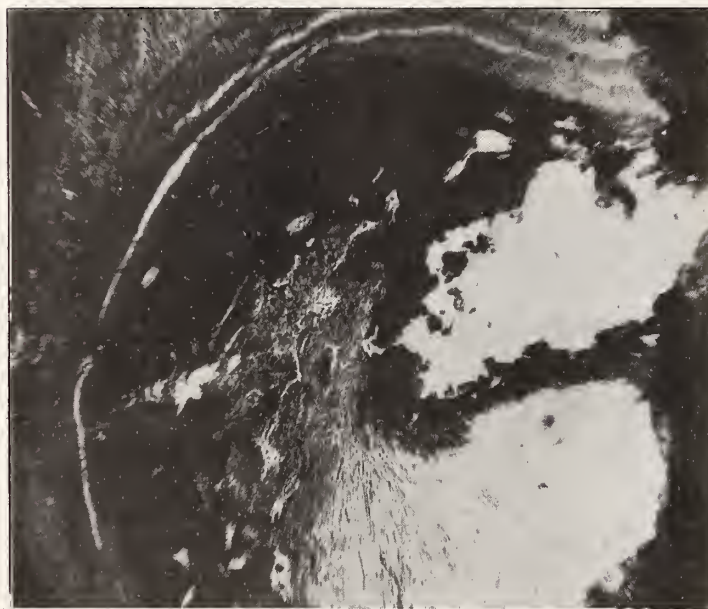
ly diminished in size. There are numerous fimbriae in the mucosa. Extensive exfoliation of the epithelium is observed.

tion between gangrenous and unaffected tissue extends to within 5 mm. of the internal os.

Microscopic Examination: There is no change



-21- Chronic Pyosalpingitis and Ovaritis and Fusion of Appendix and Distal Ostium. Age-32 yrs.



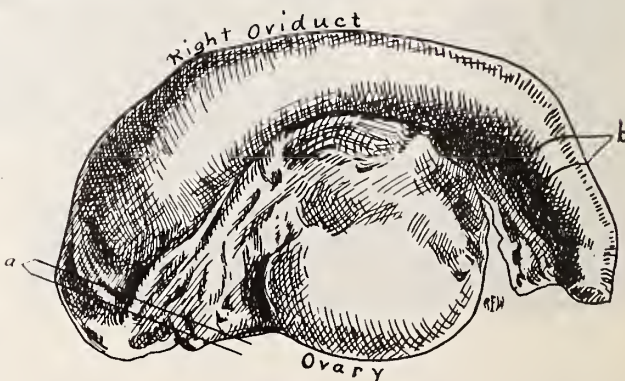
Case XXI.

Section (b) shows the same essential changes as observed in Section (a) with the exception of a much greater connective tissue increase and a larger proportion of mononuclear cells in the infiltration process.

Case 23. Case of Bichloride of Mercury Poisoning.

Age, 25 years. Has had two full-term children and six abortions. Death occurred eleven days after the ingestion of two tablets (3 and 32/50 grains) of bichloride of mercury and the insertion into the vagina of one tablet (1 and 41/50 grains) which was held in place at the cervix by a tampon.

Gross Condition Found at Autopsy: The vaginal mucosa was gangrenous throughout its entire extent. There was a bilateral laceration of the cervix which had served to hold the bichloride tablet until dissolved. The result was gangrene of the lower portion of the cervix with a sloughing of a relatively large part of the vaginal portion of the cervix. The line of demarca-



-22- Late Acute Gonorrheal and Streptococcic Salpingitis and Peritonitis. Age 16 yrs.

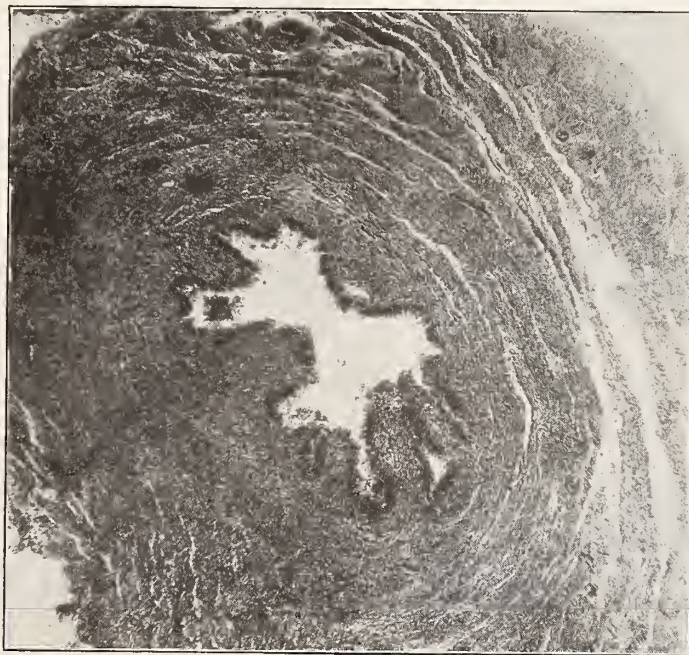
Case XXII.

in the peritoneum and muscularis other than hyperemia. The tubal isthmus of the right side shows but four primitive folds. The epithelium

exhibits recent exfoliation. The nuclei are hyperchromatic. The relative intensity of staining qualities as compared with the nuclei of muscle

Chief symptoms, Menorrhagia and abdominal pain. Operation, Hysterectomy.

The gross specimen consists of a uterus with



Case XXIII.

and connective tissue is quite marked. The left tube shows the same changes as the right, except that there is more marked exfoliation of epithelium.

Five additional sections taken from the mid and distal portions show the same essential changes of hyperemia and extensive epithelial desquamation and hyperchromatosis. In many instances the stromal portions of the folds are entirely bared of epithelium. The exfoliated epithelium shows a marked granulation, or better, perhaps, a disintegration of cell nuclei and protoplasm. In the stroma the dilated small blood vessels filled with hemolyzing red blood cells are prominently seen in each section. Occasionally there are small portions which have suffered from earlier exfoliation than that seen in the greater part of the sections.

Fallopian tube and ovarian cyst. It is markedly irregular in outline, because of multiple fibroid tumors varying in size from that of a pea to that of a goose egg. These have varying sized pedicles and subserous attachments. There are numerous additional fibroids in interstitial and sub-mucous positions. The gross mass is equal in size to that of an average adult head. Upon the left side there is a cystic mass about the size of an orange, which is attached by a pedicle to the uterine tumor mass. Along its upper border is seen the Fallopian tube, which is from 1 to 2 cm. above the cyst.

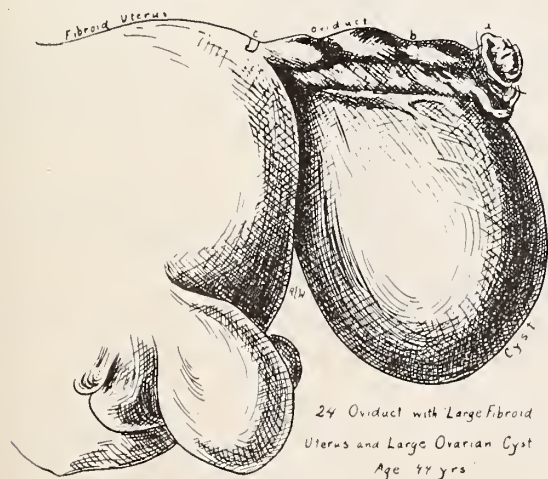
Microscopic Examination: Sections taken at (a), (b) and (c) show evidence of very slight inflammatory change. Only a few small focal aggregations of lymphocytes are observed. There is no other change, except some hypertrophy of the circular muscularis and primitive folds of the uterine ostium. The large cyst beneath the Fallopian tube is attached by a pedicle to the peripheral surface of the distorted fibroid uterus.

Case 25. Old Chronic Healed Gonorrheal Salpingitis with Multiple Lumina.

Age, 43 years. Chief symptom, abdominal pain.

The gross specimen is that of a Fallopian tube approximately divided into halves. One-half has a diameter equal to an index finger. It is distinctly resistant to pressure, and is of a shiny white color. The other half shows relatively but little enlargement and presents a number of rice-like bodies upon the under side. These bodies, however, when punctured prove to be small cysts. These miliary cysts were mistaken clinically for tubercles.

Microscopic Examination: Section (a) at the distant portion of the tube shows marked hypertrophy of wall, with an occasional focal infiltration of lymphocytes, and areas of marked fibrosis

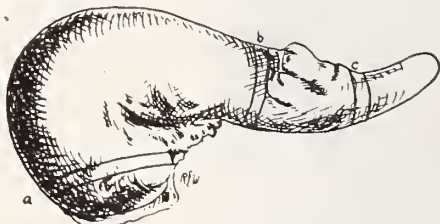


Case XXIV.

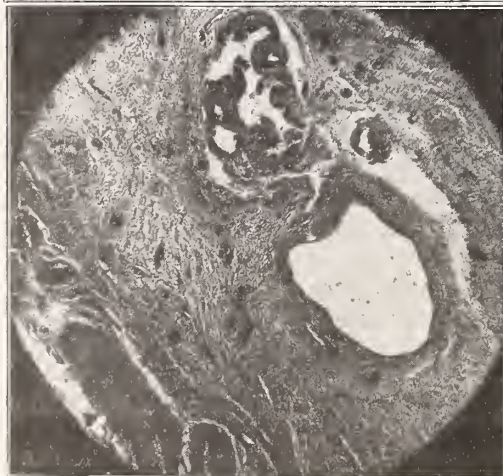
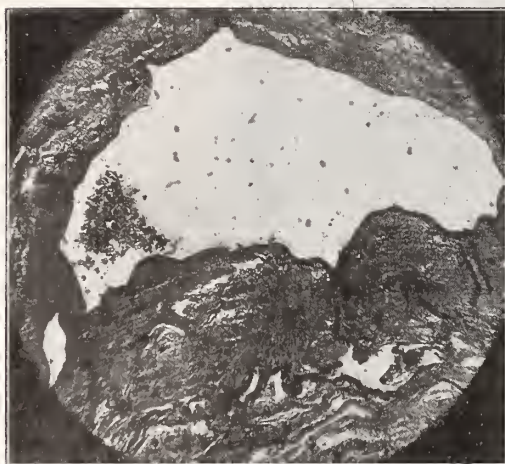
Case 24. Fallopian Tube in Extensive Fibromata of Uterus and a Large Ovarian Cyst.

Age, 44 years. Duration of condition 2 years.

involving extensively the mucosal and submucosal portions. The mucosal folds in places show fusing and marked hypertrophic and hyperplastic deformity. The tube has a double lumen, and in one of the tubal structures the folds have entirely disappeared, while in the other they are found present. The epithelium is extensively changed, being largely of very low type, and in places entirely destroyed.



25- Old Chronic Healed Gonorrheal Salpingitis
with Multiple Lumina Age 43 yrs



Case XXV.

Section (b). The wall shows a marked increase of fibrous tissue, some congestion, and some lateral fusing of tubal folds.

Section (b) exhibits marked increase of fibrous tissue, with a multiple lumen. At one part there is a cross section of typical uterine tubal ostium, and at the side of this are two tubal structures, one larger than the other and without folds. The other lumen is quite small. All portions of the lumina have an epithelial layer of the same type. This tube exhibits a well-defined double lumen and also evidence of a small tubular formation

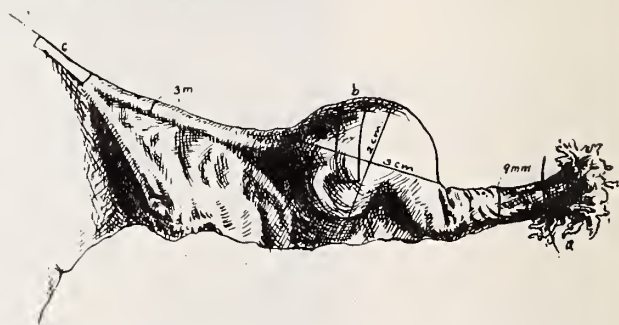
which extends through part of the length of the tube.

Case 26. Retrogressive Changes in Pregnancy of the Left Tube with Carcinoma of the Cervix Uteri.

Age, 37 years.

The gross specimen consists of a uterus, right and left Fallopian tubes, and one ovary. The uterine cervix shows marked destruction from a new growth process which extends to above the level of the internal os. The Fallopian tubes are both small in size, the proximal portions being 3 mm. in diameter. The right tube is this size throughout while the left tube at a distance of 3.5 cm. from the uterus exhibits a rounded enlargement extending through 3 cm. of the length of the tube, and measuring 2 cm. in cross diameter. The tube beyond this enlargement has an average diameter of 9 mm.

Microscopic Examination: Section (a) represents the distal portion of the tube. The changes from normal are very slight and consist of some hyperemia and edema. A few of the mucosal folds show slight hypertrophy and the epithelium is slightly congested.



26 Retrogressive Changes in Pregnancy of the Left Tube
with Concomitant Carcinoma of the Cervix Uteri. Age 37 yrs.

Case XXVI.

Section (b) exhibits a laminated blood clot, numerous chorionic villi, and considerable amnion. The enclosing tubal wall is thin and in places shows small round-cell infiltration and moderate edema.

Section (c) The proximal portion of the left tube exhibits slight edema and dilated blood vessels, now contracting. There is hypertrophy of the submucosa. The epithelium is well preserved, showing some villi.

Case 27. Embryonic Oviduct with Carcinoma of the Cervix Uteri in a Patient aged 53 years.

Age, 53 years. Duration of condition 3 months with constant hemorrhage.

The gross specimen consists of a uterus, Fallopian tubes, and an ovary. The uterine cervix is involved in a carcinomatous process. The Fallopian tubes are small and normal, except for their embryonic morphology in the outer half of each tube. These show definite embryonic folds just distal to the mid-point, and beyond the twisted portions are wave-like formations. The ovary is small and atrophic. The drawing is of one tube, ovary and a portion of the uterine cornu.

Microscopic Examination: Section (a). The

fimbriae show an unusually large amount of connective tissue of a more mature type than is usually seen in the stroma of normal fimbriae. The stroma is more cavernous than normal. The epithelium is well developed.

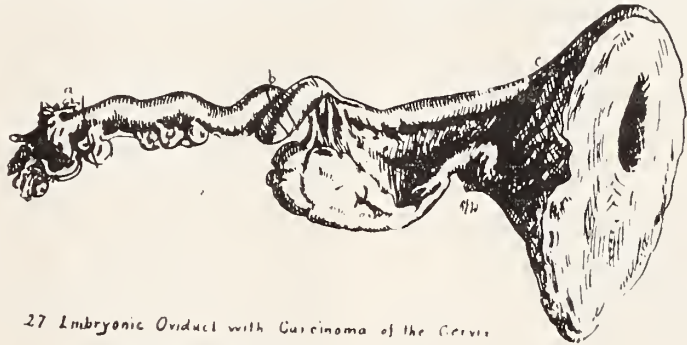
Section (b). The adventitia occupies more of the thickness of the wall than is usual. The longitudinal muscle layer is not easily defined,

tissue. The lumen is small and only two primary folds are seen.

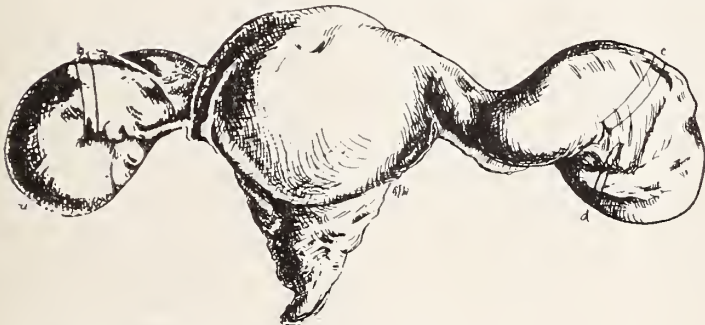
Case 28. Chronic Bilateral Staphylococcic Salpingitis and Ovaritis.

Age, 44 years. Duration of condition, 1 year. Symptoms, pain in lower left iliac region and irregularity of menstruation.

The gross specimen includes uterus, oviducts



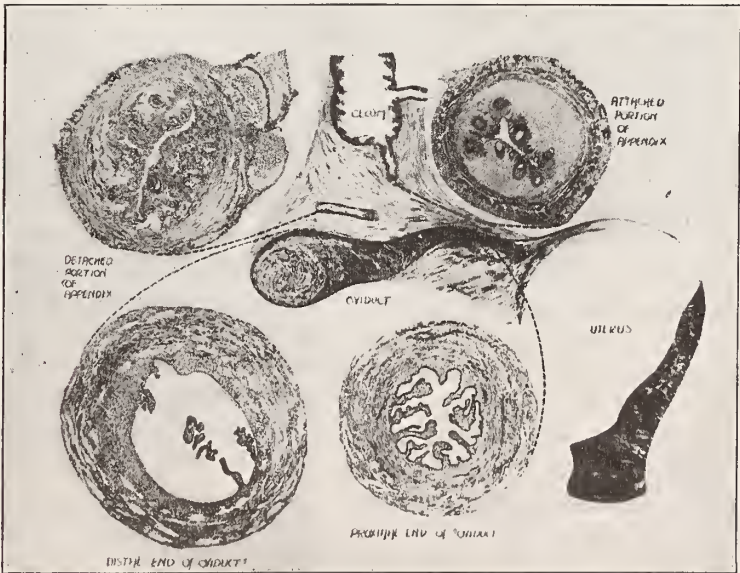
27 Embryonic Oviduct with Carcinoma of the Cervix
in a Patient Aged 5.5 Years



28 Chronic Bilateral Staphylococcic Salpingitis and Ovaritis. Age - 44 yrs
Case XXVIII.



29 Fallopian Tubes of New-Born Child - at Term
Case XXIX.



Case XXX.

the circular layer is thicker than normal, and there is no well-defined mucosa. The plicae are markedly deformed from hypertrophic and hyperplastic changes, leaving but little lumen space. The epithelium is of low-cell type, the nuclei being almost entirely round and oval shapes.

Section (c) shows a wall with marked compactness, and consisting almost wholly of connective

and ovaries removed by hysterectomy. The uterus is enlarged and the tubes fold closely about the ovaries in such a way that gross differentiation of these structures is impossible. The tubes are enlarged equally and the changes are approximately the same on both sides.

Microscopic Examination: Both tubes exhibit the same relative enlargement and a correspond-

ing similarity of pathological changes. The distal ends definitely surround the ovaries.

The sections show a large number of focal lymphocytic infiltrations through the walls of both tubes. Extensive connective tissue hyperplasia is taking place. The lumina are filled with a serous fluid and masses of red blood cells. The mucosa and sub-mucosa are greatly deformed and diffusely infiltrated with mixed types of cells. The rugae have almost entirely disappeared. The epithelium has been extensively destroyed.

Case 29. Fallopian Tubes of New-born child at term.

THE SLUDER OPERATION.*

EDW. J. BERNSTEIN, M.D.

DETROIT, MICH.

I shall not attempt to describe the technic of this operation as it has been so ably and well done by the originator in several monographs which are at the disposal of any who ask; moreover, mere description of any operation however graphically done gives no one an adequate conception of its fulfillment. This certainly applies to me and most men.

I shall, however, attempt to answer many of the criticisms made mainly by those who have not taken the pains to properly acquaint themselves and who give utterance to most of the *ex cathedra dicta*.

It is claimed that it is brutal, bloody, inefficient, unsurgical and that it was devised by Sluder because he did not know how to do a good dissection.

I shall answer the last criticism first, certainly any one who has seen Sluder do other work, will be convinced that he suffers nothing by comparison to other first class operators and he needs no champion to establish his ability.

If Sluder said that, I am sure it was true, for at the time he devised this present method it applied equally to all of us. I am sure it applied to me and to every man who is honest to himself.

I have become an ardent advocate of this operation as it is rapid, requires only primary anaesthesia, is relatively bloodless and it can be made absolutely so, if one will only not try to show how quickly one can do it.

It requires the minimum of armamentarium and the simplest kind of instruments. A mouth gag, a tongue depressor, a couple of sponge holders, the simple Sluder modification of the old Mackenzie tonsillotome—for safety's sake—a couple of artery forceps, which so far I have never once used in doing this operation.

Not one of the many modifications of the instrument is at all necessary, when once you have mastered the art, and it is an art. Sluder himself devised several modifications, mainly for others and to answer the criticisms, that he could do this as he was such a big strong man and had a powerful hand. He himself, to the best of my knowledge, does not use any of them nor need any one else. It is not power or force which does this. The moment one uses force, he at once shows that he is not at home with this method, gentleness and art alone are needed, and to avoid unnecessary bleeding it is only requisite that one hold the everted tonsil one minute or two before giving it the final turn and evulsing with its capsule.

One must avoid the conclusion from mere inspection of the tonsil and finding that one has on its under side a considerable amount of capsule that the operation is complete, it is true that such will be the case nine times out of ten, but I have had the chagrin to find that the next morning a large piece of tonsil was left, because I concluded from the inspection of the evulsed mass that I had done a complete job, however, if such be the case it is very easy to slip in the tonsillotome and remove it almost in a wink and without anaesthesia. It should not be necessary to do this, if only the operator will carefully inspect the mouth and throat after the operation. The appearance of the fauces the morning after a well done Sluder shows absolutely no sign of inflammation along the pillars and the patients, particularly the children, will begin to take nourishment that afternoon, if the operation is done in the morning.

It is said that this is not a surgical procedure. I should like to know what constitutes a surgical procedure and what not.

It seems to me that this is but idle chatter. If we accomplish what we set out to do, thoroughly, quickly, with the minimum of bleeding, or danger and with the least trauma, to the adjacent parts as is done by this method, we certainly set at rest such criticisms.

As to its celerity, it can be done in five minutes.

There are two points in the technic which I think it well to speak of: first, that it is not necessary to change the position of the operator to either side when doing this. One engages the left tonsil by holding the instrument in the right hand, and holding the instrument in the left hand for the right tonsil. It is hardly necessary to say that any one incapable of using either hand indifferently should not attempt this operation. Surely, most of us believe an operator should be ambidextrous.

*Read before Section O. A. R.L., M. S. M. S., May 20, 1920.

Secondly, in after having engaged the tonsil according to the principle set down by Sluder, the operator pushes home the blade it will now be found that the margin of the anterior pillar may have been caught in the grasp but one should hold it firmly for sixty or ninety seconds, then releasing the blade by drawing it back the anterior pillar will be free. Now gently smooth out the anterior pillar over the fenestera and then drive home the blade being careful to note that all the tonsil is thus engaged this is indicated by a slight depression in the place of the former convexity which marked the presence of the tonsil under the anterior pillar. Holding the tonsil now firmly in the grasp of the instrument a few seconds (twenty or thirty) you will now evulse the tonsil with its capsule from its bed by a slight twist toward the opposite side. Careful inspection should now take place after thoroughly drying the bed to convince yourself that no remnant or supernumerary tonsillar tissue remain behind. Should such be the case it is but a slight matter to re-enter with your Sluder instrument and remove it, or, if you prefer, grasp it with a forcep and sever its connection with a knife or a scissors. It will always be found that the fragment if any be left behind, is practically dissected and hangs by a shred.

DISCUSSION.

Charles A. Baker, Bay City: I think that Dr. Bernstein omitted just one essential in his description of the Sluder operation. And that essential I consider a very important one: That you have a suitable case for its use.

M. E. Vroman, Port Huron: I have bought Sluder's instruments and tried to use them. I am a failure so far as using Sluder's method is concerned. A Sluder appears to me in this connection very much like the old McKenzie tonsillectome which we have all used, which has a cutting blade. I used to do them with the old McKenzie tonsillectome, and I was called back very frequently to check hemorrhages. I don't know of any particular reason why that should be; the tonsils all came out pretty well, looked pretty well when I got through, the pillars did not seem to be injured, but it was because of the fact that they were cut off with a cutting instrument probably.

I agree with what Dr. Baker has just said: It would have to be quite a suitable case for me to use it satisfactorily. If your tonsil is out and free and no adhesions I probably could handle Sluder all right. If not, I could not.

For the last two or three years I have been using an open snare entirely. I dissect every tonsil before I put the snare on.

Walter Orr, Flint: Mr. President, there is just one thing that I want to say about the Sluder operation for tonsillectomy. I think, as does our friend here, that properly selected cases are suit-

able for Sluder operations. Nobody has any quarrel with that I am sure. However, I have done a good many tonsillectomies that could not have been done with a Sluder instrument, unless Sluder did the operation himself. I have come to think this about the Sluder operation, that in the hands of Sluder and perhaps in the hands of Bernstein and a few others who are very dexterous, it is a good instrument, but in the hands of the average man I think it is a damnable thing.

B. N. Culver, Battle Creek: I suppose a person who does not do the Sluder operation is more or less estopped from discussing this paper but I will say this, that I have tried the Sluder operation enough to have come to the point where I have ceased trying it, because I have found, as has been mentioned by others here, that the cases where it can be used are relatively few. But many cases fall to my lot in which I doubt very much that they could be done by the Sluder method. Such cases, for instance, as cases of post peritonsillar abscess, and cases of older people where the tonsils are quite small, as the muscle of connection is rather rigid between the tonsil and fascia over the muscle. But it is my opinion, from what operations of this kind I have done, and as I say, my experience in doing these operations is not very broad, because I did not try it very long, that we are more likely to leave some of the base and more likely to get an annoying bleeding from the Sluder than from the other operations.

F. Holsworth, Traverse City: I think most of the cases of hemorrhage from the Sluder operations are caused by bringing the knife down on the anterior pillar. I think it is to be used in very selected cases.

E. J. Bernstein, Detroit: Mr. President, I should like to say a few words in reply to what has been stated about suitable cases. Every case is suitable if you have sufficient dexterity. Now the more I do this operation, the more generally I do it. I will be perfectly free to admit that when I first started this I was careful to select my cases, and I think that is but rational. The longer I do it the less cases I find that I cannot do it with, and I am quite free to confess that lately I doubt if I do a dissection operation one time where I will do a Sluder operation twenty times. It is just a question of dexterity, I am sure, and a question of knowing it.

Now any operation is a damnable procedure when you try to do something you don't know. Who in the name of common sense would attempt to do a mastoid operation unless he knows it? And the idea of discussing an operation, and saying that it is damnable because a man does not know how to do it perfectly is—I was going to say ridiculous—but it is absolutely correct. I think it is positively criminal for a man to attempt to do a thing that he does not know how to do. And you have no business doing it unless you have seen somebody do it, and you have tried to do it yourself under his instruction, and that is what I said in the beginning, and I am sure it holds good as to every operation we do on the body.

Now as far as the instrument itself is con-

cerned: I think you ought to bear this in mind, that in doing this operation you should not have a sharp blade. Your blade should be dull.

And as far as hemorrhage is concerned: I thank fortune that so far I have had less hemorrhage, and I have had absolutely no secondary hemorrhage after doing these Sluder operations. I have not had a single secondary hemorrhage after doing a Sluder operation. I have done fourteen of them in an hour and twenty-two minutes, and I have done nine of them in fifty-five minutes, and that is on record at the Grace Hospital, and not one of them had any subsequent trouble whatever.

KIDNEY AND BLADDER SAG IN WOMEN.*

G. VAN AMBER BROWN, M.D.,
DETROIT, MICH.

While renal and bladder conditions in men and women are similar, there are some differences. Men are prone to certain of these conditions and women to others. It would too greatly prolong this paper to attempt to consider the subject in detail, so its scope will be confined to a few remarks on two conditions. One, kidney ptosis, common with, but not entirely confined to women, occurring rarely in men. The other, bladder ptosis, being peculiar to women and associated with pelvic sag.

One phase of cystocele to which little attention has been given is the residual urine and its relation to urinary tract infections. The bacteriological findings of the urinary tract in relation to the various pathological conditions is a subject still open for investigation. So far, even the question as to the normal sterility of urine seems to be debatable. Judging from results obtained in bacteriological examinations of practically normal urine, in a relatively large series of cases in women, it would seem that we are justified in concluding that a urine which contains a few germs to the cubic centimeter, can practically be considered sterile. Rarely, have we found the urine absolutely free from all germs, though what would be considered a normal urine, will show only a few to each cubic centimeter. We know that in many infectious diseases the germs present in the body are eliminated through the urine, but give no symptoms directly traceable to their presence. Normal urine has a marked germicidal action. In pathological urine the germicidal function is lost. Urine retained in the bladder for any length of time undergoes ammoniacal fermentation, and, as a consequence, its chemi-

cal character is altered. The germicidal action, due either to the inorganic contents, or a ferment ingredient, is destroyed. It needs only some pathological germ coming from above in the urine, or introduced from below by mechanical interferences, to cause inflammation.

I believe, that in women, by far the greater portion of chronic inflammations of the bladder is secondary to a bladder ptosis, caused by a relaxed vaginal outlet with resulting or associated sagging of the ventral vaginal wall. This bladder sagging may not be enough to give any marked evidence of cystocele, but if it is sufficient to cause the retention of any urine it may be accounted of sufficient importance. Poor bladder drainage may in some cases be due also to a relative ptosis from a displaced uterus.

In women beyond the menopause the bladder symptoms may be the only ones present, though the misplaced uterus was the original pathology. It is the condition producing residual urine that is the direct etiological factor in the production of most cases of chronic cystitis in women.

If after voiding, a catheter passed shows residual urine is present, in cystitis, it is the factor of greatest importance, since it accounts for the return of many supposedly cured bladder conditions.

It is evident, then, that where a cystitis is associated with pelvic displacement sufficient to prevent complete emptying of the bladder, medication can only be of value as long as it is continued, since its value comes only by inhibiting the development of the germs. If by chance the germ is removed by medical treatment, the beneficial result endures only until a reinfection has an opportunity to come through the blood stream or from mechanical interference. As a test of condition, if the vaginal canal is of sufficient capacity to admit a pessary, one may be so placed as to raise the sagging portion of the bladder, when in cases suitable for operation the urinary symptoms will gradually subside and at the end of a few weeks the urine will be sterile, indicating that proper surgical repair should and would give permanent cure.

This leads me to a consideration of kidney ptosis, because it goes without saying that many symptoms and findings of bladder urine stasis are also associated with urine stasis above the bladder. Bladder contamination, with sterile kidney urine, and no pelvic infection to account for the presence of bacteria by direct extension, is suggestive of improper drainage. The bladder ptosis may have none of the signs and symptoms of cystitis apart from the irritated blad-

*Read before the Surgical Section of Wayne County Medical Society, May 24th, 1920.

der. In the absence of kidney infection symptoms, when the bladder urine shows contamination, this condition is most frequently the result of stasis above the bladder. The most common cause for such stasis is a floating or movable kidney.

Severe kidney conditions, which give bladder irritation, are naturally outside the scope of this paper, though many such pathologies have as their beginning the conditions under consideration. Many symptoms and findings of bladder urine stasis are also found with urine stasis above the bladder, but the movable kidney up to the present is given very scant pathological consideration in literature.

The consensus of opinion seems to be that the movable kidney is very common, and may be occasionally associated with diverse morbid conditions without causing original symptoms. But a diagnosis of a surgical movable kidney is very questionable, unless the kidney is definitely giving trouble by pain, hematuria, and abdominal tumor, with possibly gastric symptoms, pain with nausea and vomiting, and occasionally an intermittant hydronephrosis. All writers acknowledge the coincident occurrence of mental and nervous disorders and movable kidney, but none see any significance in the factor, or offer any explanation. Since alienists have frequently demonstrated the rise in blood pressure, co-incident with the aggravations of mental disorders, and attribute the cause to a toxemia, a clinical study of the urine in cases with movable kidney in connection with this blood pressure investigation should be of interest.

In the "unilateral nephritis" of Dieulafoy he believes that many are due to tuberculosis. I wish to go further, and add that all of these are germ conditions usually secondary to a displaced kidney interfered with in function and are in no sense a "Brights Disease." And I believe that in the bacteriological examination we have our data for the exact medical classification. These cases are fair examples of a large class of patients in whom there is a movable kidney, that is the cause of the trouble, but this pathology is not recognized, unless it is associated with a Dietl's Crisis, when local symptoms are such that they cannot be overlooked, but long before this stage is reached the movable kidney is giving trouble and is gradually developing into the gross type.

Floating or movable kidney is the most frequent renal trouble in women and is found much more often than in the male. It is responsible for many troubles directly and indirectly, and it is for the benefit of the com-

plications of floating kidney, that surgical procedures are usually instituted.

The condition offering the best results from operation is where the kidney is freely movable and the ureter fixed giving it a sharp angulation.

We have swung strongly from the kidney fixation chiefly, I believe, because too many tried in that way to cure movable kidneys associated with enteroptosis, the cases not being segregated. Many a movable kidney was operated when the pathology giving the symptoms was elsewhere. And while I wish here to enter protest against the regular kidney belt, because, I know of no other abdominal contrivance which has so much power for evil in developing congestion of the pelvic organs, I, do on the other hand, wish to recommend the front laced corset when it can be properly fitted. It is a good test as to the probable benefit to be derived from operation, and following operation is a good support while waiting for the kidney to form its new bed.

As regards the best method of correcting a given case whether of bladder or kidney ptosis it is always a debatable question and that I do not care to discuss here.

My object this evening is to give very briefly intimation to the importance of a bacteriological study of all urines, segregated when indicated; also to the kidney and bladder sag as frequently underlying causes of cystitis, and, for permanent cure, the necessity of surgical repair.

908-14 Smith Bldg.

TECHNIC OF GIFFORD'S OPERATION FOR DESTROYING THE LACHRIMAL SAC.*

R. D. SLEIGHT AND WILFRID HAUGHEY,
BATTLE CREEK, MICH.

The technic of this operation is very simple though it varies somewhat depending on the requirements of each case. The anesthetic used is one per cent. novocaine with adrenalin.

1. The skin over the sac is infiltrated with the solution, several drops injected deeply around the sac and into it.

2. Slit the inferior canaliculus and pass a strabismus hook through the duct into the sac.

3. An incision, one to two centimeters long, (same incision as for enucleation of the sac), is made through the skin over the sac extending down to and into the sac making sure that the sac is freely opened. The strabismus hook

*Read before Section O. A. R. L., M. S. M. S., May 5, 1920.

is then removed. The wound is firmly packed to control all hemorrhage.

4. After the wound is entirely dry, the skin about the wound and the inner canthus is freely covered with sterile vaseline; sterile vaseline is put into the eye as a precautionary measure against acid reaching the eye through the duct.

5. Then with a perfectly dry, small pointed pipette, three or four drops of liquid trichloroacetic acid are carefully instilled into the depths of the wound and allowed to reach all parts of the sac.

6. The strabismus hook is introduced into the sac through the wound and the point of the hook worked upward into the lachrymal duct to destroy it. The excess of acid is then taken up and removed by means of small cotton swabs and the wound packed with narrow strips of gauze. Sometimes a suture is used to partially close the wound but as a rule, no suture is required.

The first change of dressing is made in two or three days and the wound dressed daily until it heals.

CASE REPORT.

I have operated on ten cases in private practice and in the service, all with excellent results. I will report two cases.

June 5, 1919, Mr. W., of Marshall, age 55, complained of his right eye watering for the last ten years.

Examination showed chronic Dacryocystitis. We tried the usual treatments with probe and irrigation without any results. On August 6, we performed Gifford's operation for destroying the tear sac of the right eye. We saw the patient again on August 8th, dressed the wound and continue to dress it every day for four days when he was discharged with perfect results and very small scar. Have seen the patient several times since, as late as April, 1920, and the result is still very satisfactory.

Miss G. E. G., age 18, examined May, 1919. The patient complained of pain, pus and tearing of the left eye more or less for the last five years.

Examination showed a chronic Dacryocystitis with the sac filled with pus. We operated on patient on May 20th. First dressing on May 22nd. A large amount of pus still in sac. Redressed every day for four days with slight decrease of secretion. On May 28th, reopened wound and dropped in two drops of trichloroacetic acid. Left it in for two minutes manipulating wound. Redressed and saw the patient again on May 30th. Very little discharge and wound looked very good. Dressed wound every day for a week when she was discharged cured. Have seen this patient a number of times since and all of her former symptoms are relieved.

CHRONIC APPENDICITIS, THE SCAPEGOAT OF ABDOMINAL SURGERY.*

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It may appear that this is neither the time nor the place to discuss this almost threadbare subject of chronic appendicitis but unless we are prepared to assert that our present management of the condition is wholly satisfactory and that except for the errors inseparable from human judgment we are always right in our management of these cases, we cannot afford to indulge in self-satisfaction in so common a disease. At the outset, I am inclined to raise the question "what is chronic appendicitis? We must not overlook the fact that the appendix is large in childhood and small in old age, speaking always relatively. From this it follows, that during the intervening period, some process has been going on which has shrunk this organ in all its dimension. In fact, it is not unusual in elderly people to find an appendix which has substantially disappeared and which has no demonstrable lumen. Now I hesitate to regard this process as pathological for it seems to me far more comparable to the atrophy which takes place in a variety of other organs and far more like a physiological than a pathological process. On the other hand, if one examines these appendices, at various stages in their progress along the road from the histological point of view, the process does not appear one of pure atrophy. The pathologist will properly incline to regard the changes as abnormal, whereas the clinician who sees them going on wholly without the production of symptoms will be inclined to regard them as normal.

Graves and many other observers have submitted to careful microscopic examination large numbers of appendices removed from women in the course of gynecological operations but which clinically had given no sign of abnormality. A very large proportion of the specimens showed changes which the pathologist regarded as abnormal and this has naturally enough led to the view that true pathological lesions of the appendix are present in the majority of apparently healthy individuals. This doctrine I am unwilling to espouse as it seems to me to take us into the shadowy realms in which the microscope plays the title role. In short, I hesitate to recognize as a disease a process which runs its course wholly without the production of symptoms. If

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we are in fact to regard this as a disease, then we must be prepared to admit that it requires no treatment. I confess to preferring the view which regards disease as a reaction of the individual to insult or injury of some kind and therefore to take the view that where no reaction occurs, no insult has been done and no disease exists. Consequently, I am not prepared to recognize as a disease chronic appendicitis without the production of symptoms and believe that we are entitled to insist that symptom production must be shown as a prerequisite to the diagnosis.

CLINICAL CLASSIFICATION.

Obviously, one may divide the cases of chronic appendicitis producing symptoms into

1. Those giving a story of definite attacks more or less resembling the classical acute appendicitis and showing a definite tendency to relapse. In regard to this group, there can be no doubt in regard to the propriety of treatment by operation and comparatively little difficulty in regard to the diagnosis.

2. This group may be defined as those which have no definite attacks, in which pain is variable, often referred to other parts of the abdomen, and in which the symptoms are largely reflex. These cases mimic hyperacidity, gastric and duodenal ulcer, disease of the gall bladder and bile ducts, and even lesions of organs lying outside of the abdomen, as for instance the kidney. Clearly it is with this group that the diagnostician will be chiefly concerned and it is here that most of the pitfalls will be found and most of the errors will be made.

DIAGNOSIS OF CHRONIC APPENDICITIS.

It is now some years since E. A. Codman studying a group of patients admitted to the Massachusetts General Hospital with a diagnosis of chronic appendicitis was able to show that the probability of a correct diagnosis based upon purely clinical evidence did not approach the degree of accuracy which we are entitled to expect. There will be no important disagreement with his conclusion that the physical examination and history was a highly precarious method upon which to depend. Shortly after this time the use of the X-Ray for diagnosis of lesions of the gastro-intestinal tract came into more or less general use and today few of us would be willing to dispense with this method when it is available. Roughly speaking, the evidence which may be obtained by the roentgenologist is of three kinds.

1. He may be able to show tenderness over the region of the cecum and abnormal fixity or at least lack of normal mobility which gives

presumptive evidence of an antecedent local peritonitis.

2. He may be able to show the so-called "twenty-four hour appendix" which is of course proof that the normal ability of the appendix to expell its contents is lacking though it is somewhat less clear that the appendix in its perhaps normal process of devolution or atrophy may not pass through this stage without subjecting its owner to measurable risk.

3. And finally, there is the largest group of cases in which no abnormality can be shown involving the cecum or appendix but in which a variety of abnormal reflexes in the gastro-intestinal tract give evidence of some disturbance which sets them going and are certainly commonly associated with disease of the appendix.

But clearly we must proceed cautiously in the interpretation of this so-called reflex phenomena as our knowledge of the possible sources of these reflexes is as yet far from complete. It is undoubtedly true that the same type of reflex disturbance which is produced by a lesion of the appendix may also be produced by lesions of other abdominal organs, perhaps most commonly the gall bladder and ducts. We shall also do well to remember that reflex disturbances of the gastro-intestinal tract and notoriously of the stomach are exceedingly commonly produced by lesions without the abdominal cavity and finally we cannot deny that these same abnormalities of behavior occur in individuals whom we cannot declare to be the subjects of any recognized organic disease. If these premises be admitted, it follows that the roentgenologist will in a considerable group of these people be unable to go further than to point out that these abnormalities of behavior exist and that they might be produced by a lesion of the appendix.

CRITERIA OF DIAGNOSIS.

In the group of cases above referred to giving a definite history of recurrent attacks of pain and tenderness in the right lower quadrant and especially if they be associated with fever, nausea and vomiting, we may almost be satisfied with the evidence of the history and physical examination and may even be willing to dispense with the X-Ray examination.

But it is not to these cases that I desire to draw your attention or concerning which the criteria seem to me importantly discussable. It is to the large group without definite beginning and sometimes it seems without definite end that I particularly desire to refer. The history is often of little value except to show the absence of definite evidence. The physical

examination is commonly negative and we must therefore fall back upon the evidence obtainable by the X-Ray. Tenderness and fixity of the cecum is more commonly produced by chronic appendicitis than by any other lesion and if we can exclude tuberculosis and disease of the uterine appendages in women, it will go far to substantiate the diagnosis of appendicitis. The "24-hour appendix" is at least a definite fact and though it is probably true that many patients have this condition and never know it, if taken in connection with abdominal symptoms, it is probably a sufficient reason for advising removal of the appendix.

But what shall we say when neither of these conditions exist and we are required to depend entirely upon the evidence of reflex disturbance? It is undoubtedly here that we shall most frequently be wrong and therefore it is to these cases that we should pay the greatest attention. There are those who hold that in the presence of reflex disturbance of digestion and with no contra-indication to operation from the presence of other organic disease, the appendix should be removed. To this doctrine I am unable to assent as it appears to me certain to involve the removal of a large number of appendices not only without benefit to the patient but with the production of definite harm. That the number of cases in which the appendix is removed without the relief of symptoms is large, anyone who sees a large number of patients for the purpose of diagnosis will not deny. Hardly a day passes in large surgical clinics that such patients do not present themselves and this is a condition which we should not, I think, regard with complacency or charge up to the profit and loss of abdominal surgery.

Our willingness to remove the appendix under these conditions has been considerably stimulated by the expressed opinions of eminent surgeons that the removal of the appendix was at least unobjectionable. In a word, it is assumed that an abdominal operation involving removal of the appendix is wholly free from consequences. To this doctrine I must take exception since it does not fit with my experience. Let me recall to your minds what I believe to be a sound observation, that recovery after a simple appendectomy is with many patients a far slower process than after an operation of equal severity confined to the surface of the body. We have most of us seen patients who after this apparently trivial operation have been slow to get back their strength and working capacity. This evidence it does not seem to me should lightly be cast aside and I firmly believe that no abdominal operation should be

regarded as trivial and that it may always be the starting point of a train of symptoms difficult or impossible allay. There is one group of patients in particular upon whom abdominal operations are commonly done without benefit and generally with definite harm. I refer to the so-called neurasthenics, those painful people whose discomforts cannot be matched with known organic lesion and who are often at least examples of physical protest against the conditions under which they are attempting to live. To them an unnecessary abdominal operation is a real catastrophe since it definitely confirms them in their subconscious view of the physical reality of their complaints and immensely complicates if it does not actually wreck the chance of future well-being.

If it be the first commandment of surgery that thou shalt do thy patient no harm, we are certainly required to proceed here with the utmost caution. But this runs directly counter to the doctrine of harmlessness of abdominal operations and one cannot accept both views. A somewhat kindred doctrine to the effect that abdominal surgery is in fact a study of clinical pathology must also bear some part of the blame for this, to my mind, unfortunate situation. That much knowledge of pathological conditions within the abdomen has been gained in the course of operation undertaken under a doubtful or mistaken diagnosis, is undoubtedly true but from this it does not follow that our interest in abdominal pathology justifies abdominal operations.

The corollary to this same doctrine of the study of clinical pathology is the doctrine of free abdominal incisions. No one will deny that incisions sufficiently free to enable the surgeon to do his work without important handicap are indicated but it does not appear to me to be true that long incisions leading to wide-spread search for doubtful or mythical lesions are free from objection. More nearly do I believe that the longer the incision and the more searching the exploration, the greater the damage if no lesion, the removal of which results in cure can be found. Too often has this doctrine been used to justify careless diagnosis, insufficient study and even utter disregard of the rights of the patient in the eagerness of the surgeon to obtain first-hand knowledge of the conditions within the abdomen. Such procedures are not surgery but an improper invasion of the rights of the patient and would certainly react unfavorably upon the profession were they generally known. They are nothing more or less than a prostitution of surgery and yet their occurrence is not rare.

Let me sum up the burden of my song briefly. The patient with vague abdominal pain and reflex intestinal disturbance which might be produced by chronic appendicitis is entitled to have the evidence carefully sifted. He is entitled to be assured not only that his symptoms might be produced by appendicitis but that no evidence can be obtained to show that they can in fact be produced by anything else. When we advise patients that their appendix should be removed, they are entitled to the assurance that we have studied the other possible causes of their difficulty and excluded them as far as possible. They are entitled to a decent respect for the privacy and integrity of their abdomen and to be shielded against the sort of exploration which is, in fact, nothing more than idle curiosity. If long incisions are to be made, they must be justified by the results and failure to show justification must be regarded as a definite error in judgment. If we expect and demand the confidence of our patients, we must do more to justify it.

DISCUSSION.

Dr. H. J. Vandenberg, Grand Rapids: I think this is a very important subject because there is so very much to it. Most of these cases, as Dr. Cabot said, which have pain in the right side, are regarded as appendicitis, and often operated, when they are really cases of neuroses. If the history does not sound right, if it does not ring like an appendicitis, which I think one can very soon know, if that patient had attacks of general abdominal pain localizing in the right side with nausea, you will have to look out. If it does not sound right, I think you should look for other signs of neurosis that come before pain in the right side. I believe the way to go after the neurosis side of the question is to find out if the patient has pain in the right side, stomach distress, headache, backache, etc. Personally I do not believe that the X-ray helps a great deal in these cases. If the X-ray shows there is a kink in the appendix or that it does not drain well, we are not going to operate on that information alone. I think we have to sum up the case on all sides before we operate. There are many cases operated, the appendix removed, and the neuroses made worse than before operation; then operated for adhesions, for stone in the gall-bladder, stone in the kidney, etc. I think the matter of neuroses in medicine and surgery, particularly in surgery, should be better understood by every one. I think that is responsible for more poor surgery than anything else and yet it is not at all well understood.

Dr. F. C. Kinsey, Grand Rapids: I think we are all indebted to Dr. Cabot for his drawing our attention to the difficulty of diagnosis in this large group of cases complaining of symptoms which may be indefinitely described as appendicitis. I think it is entirely a matter of diag-

nosis. I have heard it stated by good men that there is no such thing as chronic appendicitis. Of course, that is largely a matter of definition. Certainly all of us have operated on cases in which we discovered such a condition of the appendix that we could not tell that there had been pathology there for a long time.

I do not exactly agree with Dr. Cabot in the matter of incision. I think the time to be cautious is before operation. I do not believe we should operate on a case if we have more than a suspicion that it is a neurosis case. If we do operate, I think we should make the incision sufficient to make a thorough exploration.

Dr. Daniel N. Eisendrath, Chicago: I suppose you may think I am sort of a crank because I see through the spectacles of the kidney. I am going to call attention to cases I have operated, my own and those of others, where the appendix was taken out and the patients were no better, because the diagnosis was made in a hurry. As Dr. Cabot said, do not make a diagnosis of ureteral stricture or ureteral calculus. I will not deny that a patient can have both. I have removed a gangrenous appendix and six months later because of persistent symptoms removed a calculus in the ureter. If I have today or tomorrow a case of appendicitis that is doubtful, I am in no hurry to operate.

I do not take any stock, as Dr. Vandenberg said, in X-rays of the appendix. I do not care what the radiographer says. I think we should make a complete X-ray examination of the entire alimentary tract to find out whether there is anything in the alimentary tract besides the appendicitis. Secondly, a man should have an X-ray of the urinary tract and have the urine carefully examined. You have no idea unless you are in a city and see cases from all parts of the country, of the number of cases that have been operated for appendicitis and the kidney condition overlooked.

About the incision. When I was in the army we had an officer who had been operated for appendicitis and we had to give him a certificate of disability because the entire right side of the abdomen bulged out. I prefer at the present time, if I have a suspicion of trouble in the upper right half of the abdomen, to make two incisions. I may be criticized. I can make a better exploration and I do not injure the abdominal wall. I make one incision so as to examine the duodenum, stomach and gall-bladder. In that way I do not have to turn a corner to see what is in the stomach, as some men do when they are three inches from it. You cannot palpate from a distance. Second is the incision to take out the appendix. I prefer a McBurney muscle-splitting incision. You can enlarge it by the Weir modification. I prefer that to one large incision which starts from the costal arch and goes to the pubes or to the inguinal fold.

One thing Dr. Cabot said which I endorse fully was that you must not think when you operate on a chronic appendix and take it out it is not going to be any harm to the patient. In both hospitals with which I am connected we have a

number of foreigners who come back after the appendix has been removed and why. Because you cannot open the abdomen in a certain number of patients without having any number of adhesions. You can operate on seven patients out of ten and when you open up the second time you find everything as smooth as possible. In the other three it takes a half hour before you can get your bearings. That is why you cannot look at this without some calm deliberation.

There is another thing on which I wish to differ from Dr. Cabot. He does not call an obliterative appendix pathologic. I may have to change my views. I always thought when we had an obliterative appendix that gradually closed its lumen that that was evidence of a chronic appendicitis.

Dr. W. J. Cassidy, Detroit: It seems to me that the diagnosis of these intra-abdominal conditions depends on the surgeon, whether you have a radical or a conservative surgeon. A radical surgeon will see every case of pain on the right side as an appendicitis whether the patient's bowels have moved every day or every three days. This condition is usually cured by a regulation of diet and a regulation of catharsis. The other type of patient is the one who is neurotic. He complains of pain on the right side. What happens? At the first indication of pain the appendix is removed. He feels a little better for a few weeks because of the rest. Then he comes back with something else and is told that he should consult Dr. So and So, and then he is sent from pillar to post and the result is that the patient falls into the neurologist's hands, who cures the neurasthenia. That is the condition we should be on the lookout for today. There are too many abdomens opened every day. There are too many men who operate without making a diagnosis. Many patients, as Dr. Eisendrath said, have the appendix removed for a kidney lesion. How many times do you see the appendix removed for a beginning pneumonia or a diaphragmatic pleurisy? How many of these patients are traveling from doctor to doctor without relief? A number of them have spinal conditions, such as tuberculosis. All these conditions have been mistaken because the patients have not been examined. Unless the profession changes its tactics we are going to get into deeper waters every day. Christian Science and other cults are the result of doctors not examining patients the way they should.

Dr. Hugh Cabot, Ann Arbor (closing): I want to make it perfectly clear that I am not the least concerned with medicalism or conservatism. Gibson, of New York, says in a recent paper that first-class hospital operations for chronic appendicitis are wrong in 30 per cent of the cases. I am by no means sure that my own

record is any better. We do not follow our patients. We take out the appendix and lose sight of the patients in too many cases before we have a just opinion of the result. We should apparently object to being told that we could not make a diagnosis in a condition as common as this in more than 2 per cent of the cases and yet we are prepared to operate. It is not simply you and I. This goes over the world.

In order to find out if physicians who have had abdominal operations believe in all this abdominal surgery, I have been cross-questioning doctors for over fifteen years about abdominal operations done on themselves. I find that they have much less enthusiasm than for those done on the other fellow. I think the situation is serious. If we do not call to account, we will be called to account, based on the opinion that we do not guess right more than two-thirds of the time. It is clear because we are guessing more than two-thirds of the time.

I am glad of Dr. Eisendrath's support in regard to the long incision. We forget that we cannot make a long incision in the abdomen, except in the midline, without injuring some nerve supply. It is entirely possible to take out the appendix, if that is the thing we are concerned with, through a very small incision. It is my belief that it is better to make such an incision, examine the appendix, and if satisfied that it cannot be made to account for the condition, do what Dr. Eisendrath suggests, frankly admit we are wrong, and make another incision, so as to avoid cutting the nerve supply, in the upper right quadrant. I believe that that will make us more careful in diagnosis. I think it is safer for us to admit our mistakes than to have the country plastered with people who are monuments to bad surgery.

DIAGNOSIS OF HYPERTHYROIDISM.*

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Dr. Charles Mayo recently stated that there are perhaps more mistakes made in diagnosing exophthalmic goiter than any other condition, and I am sure we have all at times found the diagnosis of borderline cases by ordinary clinical methods almost an impossibility.

The symptoms of a well marked case are unmistakable. The presence of tachycardia, thyroid enlargement, fine tremor of the hands, eye signs such as staring expression, lagging lids and poor convergence, with increase in systolic blood pressure, justify a diagnosis of toxic goiter or hyperthyroidism. But, any one of

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these cardinal symptoms may be absent. Exophthalmus is found usually only in advanced cases. It may be unilateral and vary greatly at different times in the same individual, being at times scarcely noticeable.

Enlargement of the thyroid is not invariably present nor does the severity of the symptoms bear any definite relationship to its size. Indeed the symptoms are often severest where the thyroid is small or not palpable at all, while slight or atypical symptoms may be associated with goiters of considerable size.

Tachycardia is one of the earliest as well as the most important and constant of the four cardinal symptoms, the pulse rate varying from 80 to 160 beats per minute, more rarely it may run as high as 200. A pulse persistently over 95 while the patient is in bed is suggestive of this condition. Tachycardia with slight enlargement of the heart and a systolic murmur at the apex may be the only things found on physical examination. On the other hand a low pulse rate does not necessarily rule out hyperthyroidism as it is occasionally found in very mild types of the disease.

The fourth cardinal symptom is tremor. It is usually fine and may be manifest only in the fingers. It is rapid and rhythmic in character, occurring 8 to 10 times per second. It should not be confused with the tremor of alcoholism or tobacco poisoning which it may resemble. More rarely the tremor may be coarse in character and amount to an actual shaking of the limbs or even of the head and body, simulating early paralysis agitans. Tremor is present in the majority of cases, but may disappear and reappear from time to time.

The systolic blood pressure is usually increased, having been above 140 in 51 of 100 cases studied at Jefferson Barracks, Mo., during the late war. Yet it may be low; and in the most severe case I have tested out the systolic pressure was 106 and the diastolic 50.

It is the differential diagnosis of borderline cases and the determination of the toxicity of a goiter in some cases which is frequently difficult. The symptoms of thyrotoxicosis may be intermittent. Many patients give a history of repeated nervous breakdowns with mild symptoms such as tachycardia, nervousness and a tendency to unusual sweating. These periods of hyperthyroidism may be followed by long intervals of quiescence. More severe symptoms may not appear until months or years later or not at all. Many of these patients may live in comparative comfort and are not incapacitated by their hyperthyroidism. There are also many patients who suffer from mental or nerv-

ous or circulatory disturbances which are diagnosed as psychasthenia, psychoneurosis, hysteria or neurasthenia, and who are treated for these conditions in sanatoria or rest cures, when in reality they are suffering from toxic goiter. On the other hand any of the prominent symptoms of hyperthyroidism such as palpitation of the heart, nervousness, shortness of breath and a general feeling of exhaustion on exercise, precordial pain, a tendency to perspiration, hot flushes of the face and hands, all of which symptoms are exaggerated by physical strain and excitement, may be found in cases of neurocirculatory asthenia.

The writer has also occasionally found it difficult to differentiate between hyperthyroidism and incipient tuberculosis. It frequently happens that a patient has fatigue, asthenia, loss of weight and strength, nervousness, tachycardia, vasomotor, instability and slight elevation of temperature which makes one suspicious of tuberculosis, but physical signs, laboratory and x-ray findings are insufficient for a positive diagnosis.

One of my patients with an enlarged thyroid had a definite pulmonary lesion and underwent a prolonged course of treatment sufficient to have arrested her tuberculosis; but a rapid pulse, fatigue and slight elevation of temperature continued. With the aid of the adrenalin test I determined these symptoms were due to thyrotoxicosis. Six x-ray treatments of the thyroid and thymus glands caused them to disappear.

A year ago I found both pulmonary tuberculosis and toxic goiter in two cases. Without the aid of one of the newer tests, a definite determination of this would have been impossible. Both had definite enlargement of the thyroid, nervous symptoms common to both diseases and distinct physical signs of tuberculosis. Both cases reacted to the Adrenalin test. From one I removed 20 ounces of a serous pleural effusion at one time, and 12 ounces a week later; but because the patients were unusually well nourished, with a tendency to obesity, hypothyroidism had been diagnosed and thyroid extract given. Under the usual treatment of rest, etc., the tuberculosis has been arrested and six X-ray treatments of the thyroid and thymus glands have cured the hyperthyroidism in each case.

It is seen therefore that there is an urgent need for something besides the usual subjective sensations and clinical manifestations to enable us to make an early and accurate diagnosis of hyperthyroidism in many cases.

Two recently proposed tests are now being

widely used for this purpose. One, the determination of the basal metabolism. Two, the Adrenalin test. Mc Carrison says that "the presence of a goiter with tachycardia alone, or with tremor alone is not sufficient warrant for the diagnosis of Graves Disease in the absence of other signs of sympathetic or metabolic disorders, yet there is abundant evidence in the literature that such cases frequently come to operation." With an apparatus devised by Benedict and put out by the Sanborn Instrument Co., Boston, the normal heat production or basal metabolism of each individual can be accurately determined.

In several diseases, such as pernicious anaemia acidosis and leukemia, the production of heat is greatly increased without a corresponding increase in bodily temperature. By far the greatest increase is found in Graves Disease, at times amounting to 100% above normal. This has been found to be so constant that the determination of the basal metabolism is thought by many clinicians to be an important index of toxicity in hyperthyroidism and a reliable and accurate method of differentiating it from all other conditions. It is probably safe to say that a marked increase indicates over action of the thyroid gland, other possible causes being excluded. But the reports of cases by Means, Peabody and others seem to show that the metabolism level does not always vary with the symptoms and signs of thyrotoxicosis, and that cases of undoubted hyperthyroidism may have a low basal metabolism. Moreover Woodbury has shown that when many cases of hyperthyroidism are subjected to a rest cure the basal metabolism becomes normal. Hence a low or normal metabolic level does not *necessarily* exclude Graves Disease. While therefore this test can not be considered a specific one, all observers agree that it is of great assistance in differentiating toxic from non-toxic goiters, as well as in distinguishing between true hyperthyroidism and cases of neurasthenia, neuro-circulatory asthenia and other allied conditions. Means, McCaskey and others have pointed out that metabolic determinations are of great value also in enabling us to intelligently follow the progress of a case of thyrotoxicosis whether treatment be medical, X-ray or surgical. Means maintains that the metabolic curve, pulse curve and weight curve are as important in toxic goiter as the temperature, pulse and respiration curves are in pneumonia. He has also shown that the metabolic level is of great value to the surgeon. He divides cases of hyperthyroidism into two groups. First, those with extreme tachycardia and a moderate metabolic level.

Second, those with moderate tachycardia and extreme metabolic elevation. Patients in group one do equally well with x-ray or surgery alone, or with surgery preceded by X-ray. In group two, surgery alone gives poor results; the x-ray alone may cure, but the x-ray followed by surgery may be necessary in the most severe cases. It follows therefore that every physician or surgeon treating cases of hyperthyroidism should have at his command the proper equipment for making basal metabolic determinations.

The Adrenalin test for hyperthyroidism has been largely worked out by Goetsch, who after an experience of five years believes it to be reliable in perhaps 95% of cases. It is made as follows:

The patient lies quietly at least an hour, while observations are being made on the systolic and diastolic blood pressure, pulse and respiration rate. Notes are also made on the presence and degree of tremor, sweating, pulsation of vessels, nervousness, etc., etc. When the blood pressure, pulse and respiration rates are found to be constant for several observations made at five minute intervals, an injection of 1/2 C. C. of 1:1000 solution of adrenalin is made into the deltoid muscle. Records are then taken of the systolic and diastolic blood pressure, pulse and respiration rates every two minutes for ten minutes, then every five minutes for one hour, and then every ten minutes for half an hour. At the same time any changes in symptoms or the appearance of new ones is noted.

A positive reaction consists in the production of a rise in the systolic blood pressure or of the pulse rate of ten or fifteen points, accompanied by the production of rather typical symptoms, such as flushing, sweating, increased vascular pulsation, increased tremor of the hands and often of the arms, restlessness, and more or less marked general nervousness. The blood pressure may rise 30 or 40 points in marked cases, and the tendency of the pulse is to follow the systolic pressure. At the same time the diastolic pressure drops. Respiration usually increases in depth but not in rate. A moderate rise of blood pressure or pulse rate alone, without characteristic increase in symptoms, is not regarded as constituting a positive reaction. Slight symptoms may appear in many instances in which a definite reaction is not obtained, and it takes a little experience with positive and negative results to be able to differentiate between the two. Goetsch states that in border line cases it is not uncommon to find a greater degree of increase on the part of either the pulse or blood pressure in one case, in an-

other on the part of the subjective symptoms and signs. In order to be sure a test is positive it is not necessary to have a marked increase in *every* expression of the test no more than it is necessary to find every sign and symptom present in order to make a clinical diagnosis of hyperthyroidism. In such a complex syndrome as this, one must be content to find a majority of the signs and symptoms present. To my mind, he writes me, the disease itself renders certain structures more sensitive to adrenalin than others. The reaction usually begins about twelve minutes after the injection of the adrenalin, reaches its climax on the average in thirty-two minutes and is finished in a little over an hour.

But it occasionally happens that the secondary rise is greater than the early preliminary one, the latter being most marked in about 15 minutes, whereas the former is seen more commonly at the end of three quarters of an hour to an hour. The adrenalin test is now being extensively used by many clinicians and laboratory workers, most of whom consider it of great value in the diagnosis of hyperthyroidism. Crile writes me "We have made hundreds of observations at the Lakeside Hospital both with the basal metabolism test and with the adrenalin sensitization test, and on the whole we place a little more reliance upon the adrenalin test. However, these two tests make a very good combination when used together."

A few criticisms of the test have recently appeared, especially by exponents of the metabolic test who maintain that a positive reaction is of no value unless the basal metabolism test is also positive, overlooking the fact, as previously stated, that the metabolic level has been found low or absolutely normal in undoubted cases of hyperthyroidism. Goetsch has also shown that the adrenalin test may be positive even in the quiescent phase of the disease, and in this particular the adrenalin test is of greater diagnostic value than the metabolic test. If dependence is placed on the metabolic test only, such cases would fail to receive the x-ray or surgical attention necessary for a cure. An interesting article by Miss Sandiford of the Mayo Clinic was published in the April Journal of Physiology, in which she stated that there is no relationship between the character of the adrenalin reaction and the *degree* of activity of the thyroid gland. Goetsch absolutely disagrees with this conclusion "except in a certain group of cases of hyperthyroidism which have a rather high degree of toxicity and in whom the tissues upon which the reaction depends have been so fatigued or damaged by the in-

toxication that they are unable to respond to the adrenalin as they otherwise would if these tissues were in a more normal state. This holds true of the reaction to drugs of any tissue in the body. In these cases an apparent clinical activity of the thyroid may be far in excess of the reaction to the adrenalin. But one would not *need* the adrenalin test to make a diagnosis in such very evident cases. It is only in the mild or moderate degrees of thyroid intoxication that we may need such assistance."

It has also been found by Goetsch and a number of others that the adrenalin test may be mildly positive in a small group of patients with unstable vegetative nervous systems, which for want of a better term we classify as effort syndrome or neurocirculatory asthenia. But as Goetsch says, in these cases the symptoms often run back to childhood. Such patients frequently state they have never been well and often have a neurotic family history. They do not have invariably the distinct clearcut history of most hyperthyroidism individuals, and a careful history and physical examination will usually enable us to make the differential diagnosis.

CONCLUSIONS.

1. The basal metabolism test is of great value in the diagnosis of hyperthyroidism.
2. In the management of hyperthyroidism determination of the basal metabolism is as necessary as is the estimation of the amount of sugar in a case of diabetes.
3. A negative adrenalin test excludes hyperthyroidism.
4. A definitely positive adrenalin test means hyperthyroidism in all but a small percentage of cases.
5. The adrenalin test is always positive in true hyperthyroidism.

DISCUSSION.

Dr. M. A. Mortensen, Battle Creek: I have been very much interested in the question of hyperthyroidism for a number of years. I think that all of us will recognize the fact that hyperthyroidism is probably more prevalent the last two or three years than it was previously. But it seems to me that the probability is that the severe upper respiratory tract infections to which the country has been subjected the last two seasons is possibly a factor in bringing about these conditions.

As to differential diagnosis, I consider that a very important problem and one that every one should give great consideration in dealing especially with the border line cases. Personally, I

am not very familiar with the Goetsch test excepting from the literature and I am not in a position to criticise the position as to whether that is an absolute test or not.

Concerning the basal metabolism test, I would say this—there is danger of putting too great reliability on this test for the simple reason that we get cases in which we are suspicious of hyperthyroidism; and, if we are so situated that we can have the basal metabolism estimate and we find that is considerably above normal, then we are prone to conclude immediately that this must be hyperthyroidism. We must remember, in dealing with basal metabolism, there are other things to be considered and should also remember the fact that there are many other conditions that, as far as we are able to determine, do have a plus metabolism that are not directly due to hyperthyroid disturbance.

I have had some very interesting experiences in cases where you would expect just the opposite when it comes to the basal metabolism. For instance, the question of pernicious anemia. We would think from the general physiology, at least at first thought, that the majority of the people would have a low metabolism rather than a high metabolism; where, as a matter of fact, we find them ranging from minus five or ten up to plus thirty and even more. I recently had a patient who had a decided polycythemia. Red cells, about eight million. In this case his metabolism was in the neighborhood of plus thirty. And so on through the line. The metabolism in itself must not be recognized as a positive test but we must have the clinical findings of hyperthyroidism in addition to the increased metabolism.

For instance, the patient that has been under an unusual nervous strain, what we are pleased to term neurasthenia or nervous exhaustion. Many of these cases will show a plus metabolism of twenty-five and thirty-five per cent. In these cases we must consider that the increased muscle tonus or the tension these people are under is not the factor that is causing the plus metabolism.

I have seen this happen in this type of cases, that the first time they have the test they are anxious as to what the result is going to be. It is a new proposition to them. They are on a nervous tension and we get increased metabolism of say thirty or thirty-five per cent. Two days later, put them through the test again, and it has dropped. Three or four days later, it drops still farther. They get accustomed to the test and then you get the actual metabolism under their normal conditions.

And so we must be careful in these cases of not relying absolutely on any laboratory test, in my opinion; but must take into consideration a history of physical findings and the general makeup of the clinical picture in order to come to proper conclusions.

Dr. Hugo A. Freund, Detroit: Dr. Johnston's paper indeed brings up a very timely subject, in that it brings to our consideration now the evaluation of two tests which have appeared within the past few years. I think many of us are very prone to place a great deal of reliance upon a new test when it comes and accentuate its value in our minds when, after all, we should consider some of the basic things that are concerned in the disease that we are studying.

For the past ten months I have been interested in basal calorimetry. It is used in my office quite extensively on all suspicious thyroid cases and also to check, as it were, those cases of hyperthyroidism in which we were instituting a definite course of treatment.

Now, it has been my experience in not a very large series—something close to fifty now—that the Benedict calorimeter, after all, is a very definite check on hyperthyroidism.

I cannot quite agree with some of the conclusions of Dr. Johnston in that the Goetsch test, which I have used alongside of it in many instances, has not been so reliable. I find that a neurotic and that an individual suffering from a chronic illness other than hyperthyroidism at times responds to the Goetsch test where the metabolism is quite normal.

I can also say that there is certain danger in the Goetsch test in certain individuals. Particularly is that so in the hypertensive cases associated with hyperthyroidism.

We must bear in mind one of the first actions of adrenalin is to increase vascular tension. Hypertension is not an infrequent accompanying symptom of hyperthyroidism. Not infrequently have I seen some rather severe and even alarming symptoms arising from the administration of ten minims of adrenalin subcutaneously.

I don't think either can be carried on outside of a well equipped hospital or in an office where someone is making daily such tests. After all, they require the same individual to make tests so that you have unanimity of observation and result. And, at the same time some one who takes into consideration the fact that after all instruments such as the Benedict are sources of frequent error. Benedict himself has pointed out that the normal metabolism which is around one hundred, can vary between ninety and one hun-

dred ten and be normal for an individual. Only after repeated tests should we place any reliance on the test.

When we have determined we really have a condition which requires treatment I think we have in the calorimeter a distinct advance for the control and observation of such cases. In those we have had under observation for the longest period of time—say six or seven months—who, every two weeks, have had rest and some general treatment as might have been indicated in the case—we have seen a progressive lessening of the symptoms. I think the great advantage of the calorimeter has been in determining how great the improvement can be in individual cases. It has been my good fortune to see that in this period of time I have yet to see a case, with X-ray and proper treatment, that has not shown definite improvement. That has been the general experience of those working with it. That is the real value of the test.

Dr. George B. Eusterman, Rochester, Minnesota: This work is largely done under the direction of my colleague, Dr. Plummer.

I have been much interested in what Dr. Johnston said. I have been very much interested in what Dr. Mortensen said in reference to the observations he made in reference to basal metabolism. After all has been said and done, I agree in the main with what Dr. Freund said. He places a great deal of reliance on the study of basal metabolism. It is a good deal like urinalysis and temperature reading.

Dr. Mortensen emphasized correlation of data, which after all, is the fundamental thing. A few things which helped me in recognizing hyperthyroidism that probably have not been brought out or emphasized by Dr. Johnston. Under the usual aspect we get a syndrome which may be closely imitated by other conditions, particularly neurotic changes. If, in addition, we have bruit in the super thyroid vessels, a tremor, a fine tremor and not a coarse tremor, a peculiar fatigue of the muscles of the limbs so that when the patient tries, for instance, to step forward to the piano, he usually steps back again; and we have a disproportion in the systolic and diastolic blood pressure readings. As the disease progresses, there is a tendency for the systole to increase while the diastole goes down. A distinction or difference from the purely hypertensive types.

Relative to the Goetsch test. I had the good fortune to attend the New York Academy of Medicine two months ago. It is to my regret I do not recall the name of the young man con-

nected with the Peter Bent Brigham Hospital with which Goetsch is connected and who was an associate of Goetsch, who has done a good deal of pioneer work. In this discussion, this young man brought out some of the fallacies and the conclusiveness of the Goetsch test. Fortunately, Goetsch was there and he could point out in a study of twenty-five indisputable cases—in which the pathology was checked up on the cases so that there was no mistake in diagnosis—there was failure to react entirely by the Goetsch test in five cases. Goetsch brought up the issue that the adrenalin was not fresh and some further reasons, but it was proven that the adrenalin was fresh and was given under the proper procedure.

So I have a feeling that probably the Goetsch test is an overvalued test. There are other reasons that can be brought out in this paper.

One more point about the neuro circulatory disturbance. We have them in civil life but we did not recognize them before the war, as we do just now. One big difference between them and the hyperthyroid case is that they do not lose weight. When they rest and lie down their pulse rate becomes practically normal.

A CASE OF PELLAGRA.

ROBERT C. MOEHLIG, M.D.,

DETROIT, MICH.

While pellagra is a very common disease in the Southern states only isolated cases are found in the North. The case here reported developed the skin changes late in the course of the disease after exposure to the sun.

Case Report: O. D., age 19 years, female; admitted to Harper Hospital May 10, 1920.

Entrance Complaints—1. Stomach trouble.

2. Diarrhoea.

Duration—1. 2 years.

2. 1 year.

Family History—Unimportant.

Social History—Single, born in Nashville, Tenn., coming to this city 4 years ago.

Past History—Unimportant.

Menstruation—Regular until 4 months ago, when it ceased.

Present Illness—Began about 2 years ago with "cramps" in upper abdomen, coming on about four to five hours after meals. Coarse foods in

particular produced nausea and vomiting. No hematemesis at any time. The symptoms continued for about a year with a gradual loss of weight. A year later she noticed that her bowel movements were becoming more frequent, moving about 5-6 times a day, had a very offensive odor and were of a watery consistency. No pain and no blood seen at any time. Her mother said that the girl had been more or less peculiar in her diet, being fond of cabbage, corn and hominy, but did not care for meat, eggs or milk.

Physical Examination—Reveals a very emaciated, anemic female, weight $67\frac{1}{4}$ pounds. Skin over face is drawn, giving her a much older appearance. She answers questions intelligently.

Head: No abnormalities.

Scalp: Hair dry, comes out easily.

Eyes: Negative, except for prominence due to emaciation.

Teeth: Pyorrhea around lower central incisors; mouth hygiene fair.

Throat: Negative.

Neck: No enlarged throid or palpable cervical glands.

Chest: Ribs prominent. Expansion equal. Breath sounds exaggerated due to emaciation. No rales or signs of active tuberculosis (Dr. H. M. Rich.)

Heart: Normal size and sounds.

Abdomen: Scaphoid. Liver, spleen and kidneys not palpable. No tenderness.

Genitalia: Negative.

Extremities: Negative.

Reflexes: Normal.

Blood Count: R. B. C. 3,384,000.

W. B. C. 8,400.

Hemoglobin 80%.

Polys. 68%.

Small 28%.

Large 4%.

Average Temperature: 99.6. Pulse: 120.

Wassermann: Negative.

Stool Examination: No ameba. No occult blood.

Gastro-Intestinal X-ray: "We cannot determine the cause of the disturbed gastric motility." (Dr. Hickey)

Further Course of Disease—May 24, 1920: Patient gained 4 pounds since admission, on a diet of milk, eggs and vegetables. Diarrhea continues.

June 10, 1920: Patient has gained 6 pounds since admission. Has been in sun every day. Receiving intestinal astringents and has had ten (10) Sodium cacodylate injections of 3 grs. each. Diet as above. During her stay at Hospital has often refused meals. On this day, after having been exposed to the sun for 3 unusually hot days the skin of her hands became reddened and blistered. This extended to the sleeves of her gown. At her request she was discharged from the hospital.

Two weeks later she was seen at home. She complained of severe abdominal pains and diarrhea, which was becoming worse, the bowels moving 10-12 times a day. Opiates were necessary for the pain. She lay in a stupor, refused to eat and was failing rapidly. Her legs were edematous. The skin of her hands was peeling off, leaving erythematous areas. Her blood pressure was: Systolic 92; Diastolic 72. Her tongue was swollen and showed a true glossitis. She became delirious and kept repeating words and phrases which rhymed. The blood nitrogen at this time was 35 mgs. per 100 c.c. Dr. J. B. Rieger reported an acidosis condition, using his alkalimetry method. The patient lapsed into coma and died July 16, 1920. Unfortunately no postmortem was obtained.

The case illustrates the production of pellagra dermatitis after exposure to the sun's rays and a peculiarity in diet.

The attention of our readers is invited to the brief article on "Adrenalin in Medicine" which will be found in the advertising section of the current number of this journal. While, obviously, this space is purchased for advertising purposes by Messrs. Parke, Davis & Company, it has been put to a novel use by the publication therein of a scientific essay of unusual merit in which a vexatious problem is discussed.

Whatever intelligence the future has in store on the pathology of asthma, the present state of our knowledge justifies the use of any dependable therapeutic measure for the relief of the acute

paroxysm. Morphine is objectionable for reasons that are generally accepted. Per contra, Adrenalin does not narcotize the patient. It affords him almost instant relief, with no disagreeable sequela to mar the effect. To quote from the announcement under consideration, "Adrenalin is the best emergency remedy for the treatment of the asthmatic paroxysm at the command of the physician."

Two to ten minims of the 1:1000 solution are injected subcutaneously or into a muscle, relief usually following in a few moments.

The Journal

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October

Editorials

INCREASED DUES.

The House of Delegates, at its last session, increased our membership dues to Five Dollars per year. Secretaries are reminded of this action and we are calling attention to it again so that when you collect your 1921 dues there be no error.

PUBLIC HEALTH.

In the last number of "Public Health" which is gotten out by the Michigan Department of Health, there appears an article, entitled "Let Michigan Lead in Health."

The following table shows Michigan's position in 1918 among 30 states in preventing deaths from contagious diseases:

30th in preventing diphtheria.....685 deaths
 26th in preventing scarlet fever.....178 deaths
 20th in preventing small pox..... 16 deaths
 17th in preventing typhoid fever.....332 deaths
 16th in preventing whooping cough....492 deaths

14th in preventing measles.....252 deaths
 21st in preventing the above six....1955 deaths
 9th in preventing tuberculosis.....3567 deaths
 11th preventing the seven diseases5552 deaths

In reading these rankings, it should be remembered that the census comparisons are of deaths, not of cases, of preventable communicable diseases. It is true that it is the case rather than the death which is discreditable to modern civilization. However this ranking by preventable deaths is the best index we now have.

If Michigan had earned first place or had equalled the first place winner in fighting each disease, lives would have been saved about as follows:

Typhoid fever 100
 Small pox 16
 Measles 200
 Scarlet fever 169
 Whooping cough 350
 Diphtheria 570
 Tuberculosis 500

Seven diseases2005

The funeral bills alone for these 2000 deaths in excess of best rates are several times the total cost of Michigan's preventive health work, not to mention the cost of the excess preventable sickness these fatal cases represent.

After these tables had been compiled, Commissioner Olin called a conference of bureau heads, showed them Michigan's ranking and stated, "I want you all to take a good look at this unenviable record and see to it that each of you helps cut down the preventable diseases until Michigan leads."

We do not believe that "taking a look" at these figures will improve conditions. Neither can it be expected that steps to reduce the number of these diseases will be successful if individuals or scattered groups of individuals in various parts of the state determine upon and institute varied methods for combating these incidents of disease. What is needed is a state-wide movement, definite methods—in brief a uniform campaign of action. We suggest that in "asking us to look," that the Commissioner of Health should not stop there and complacently expect results. We want a plan that is state-wide in its scope.

Our Membership Drive

As previously announced our House of Delegates has directed that each County Society conduct a membership drive during the month of October for the purpose of securing as members for our County and State Society those men who remain unaffiliated as members but who are eligible for membership. The purpose being to cause our state organization to be composed of all the eligible doctors in Michigan—a real one hundred percent state society.

The only bars preventing membership are: A man unlicensed to practice, advertising immorality, unprofessional conduct and practices, association with faking institutions and abortionists.

Members of all recognized schools of practice are eligible.

The purpose, further, is to bring into close, effective organizational relationship every reputable physician in Michigan. By so doing to perfect our organization, to adopt such policies, to engage in such organized efforts as will elevate our standing, conserve our interests, enhance our efficiency, and cause our being recognized in our expressions and demands in regard to health legislation. To bring about such conditions as will create a better understanding as to the direction and scope of our work by the people as a whole and thus cause them to realize as well as recognize that we are potent, essential factors in the communal and industrial movements undertaken in our state and thereby accord us the recognition to which we are justly entitled. Finally, but not least, to elevate ourselves so that individually and collectively we become more proficient in our work.

To attain these ends, the House of Delegates, directed that each county society take such steps as will best secure a complete canvass of their localities to ascertain who there are among them who are eligible but still are non-members. Having thus compiled such a list, to then arrange that these men be interviewed and their applications solicited.

The dues for the remainder of our 1920 society year is remitted. State dues of \$5.00 for 1921 should be collected. Upon receipt of state dues, The Journal for the remainder of 1920 will be sent them free and continued through 1921.

County Society officers are requested to see that such a drive is conducted in their district during the month of October.

Individual members are urged to participate and assist in securing applications from non-members. Approach every doctor you know, who is not a member, ask him why he is not a member and don't leave him until you have answered his reasons, and secured his application.

In this drive, above all, don't let a petty reason or dislike, dissuade you from inviting an eligible man. Be broad-minded and open-hearted. As fellow members you will get along vastly better, if you have had past differences.

The success of this drive depends upon your co-operation and effort. Have pride enough to cause your county to be listed in the one hundred percent class. Contribute the necessary time to accomplish such a result.

This Drive must be a success. Other states are watching our results. So let's go to it and put it over. Are you ready? Well, "Let's Go."

HOSPITAL STANDARDIZATION.

There is no denying that the minimum standard adopted by the American College of Surgeons for hospital administration and efficiency is a fair, just and timely requirement. This standard demands the making and keeping of accurate case histories, progress notes, admittance and final diagnosis, laboratory work and a monthly analysis of these records and the work done. In addition consultations and the holding of autopsies are urged. Then too there is the important requirement that the hospital trustees, the staff and visiting physicians go on record as against the secret division of fees and that they withhold the privileges and services of the hospital from those who engage in this practice. It is also demanded that at least monthly meetings of the staff be held to discuss the work that is being done and to analyze the clinical results secured. These are the more important requirements that are included in this minimum standard.

The Council on Education and Hospitals of the American Medical Association has adopted certain like definite requirements in order that a hospital may be approved as suitable for the training of internes.

No just criticism can be registered against these demands. Condemnation cannot be pronounced against these standards and requirements. That which they seek to correct, that which they seek to eliminate, the reforms they institute, the efficiency they outline, the evils they eradicate are all demanded by conditions that have been permitted to exist all too long in our American hospitals. We have tolerated a state of affairs that has been far from creditable and far below the standard and progress of our educational institutions and our scientific advancement. Too long have our hospitals been permitted to be hotels for the sick, and buildings wherein surgery has been performed without restraint, and frequently without indication. One needs but reflect upon past conditions when numerous reasons will at once become self apparent as to why these reforms are indicated.

Our hospitals, their staffs and Boards of Trustees have but one option and that is to adopt and live up to his standard. There is no alternative, there is no middle course, there is no evasion. To be an approved hospital the full requirements must be met. Let no one be deceived or deluded that they can outwardly adopt these standards and secretly evade carry-

ing out their provisions. No outward veneer of reform can be erected about inner subterfuges and go undetected. There is no chance for bluffing and getting away with it. To be an approved hospital and to remain on the list of approved hospitals there must be a constant meeting up to the standard. We desire to emphatically emphasize that fact. These national organizations cannot and will not condone or tolerate back-sliding or half-way measures.

The list of approved hospitals will be announced on October 11th at the meeting of the Clinical Congress of Surgeons in Montreal, and, as we understand it, will include all hospitals of 100 beds or over. Unconfirmed reports have it that there will be many surprises revealed in this list. It is also rumored that this past month a number of our larger and better known hospitals have been making a desperate effort to institute certain changes that were necessary to comply with the requirements that are exacted. It has also been whispered about that certain of our Michigan hospitals have had to institute a number of reforms, and that in some where announcement had been made that they had adopted and were living up to the letter of the standard, reversion to old practices and methods were still in vogue. All of which indicates how necessary this reform in hospital administration is called for.

As individuals, as members of local and state societies, we, too, have but one course and that is in our hospital connections and work we subscribe our support and conduct our work in conformity to the requirements outlined. There is no need to attempt to object, buck or obstruct that which is expected from us. We must comply with the requirement of giving an admittance diagnosis, we must submit to the checking up on that diagnosis either in the operating room or in the laboratories. We must needs carefully go over our cases, record detailed histories, progress notes, treatment and end results. We must employ every means available to arrive at a correct diagnosis and submit to a check up on our errors. In doing so we are going to become better physicians and surgeons, our patients are bound to receive better care and attention, our hospitals will be what they should be. There is no need to grumble, to storm about, or, "be damned if I will." The sooner we realize this the better it will be because—well, we have no alternative unless we wish to be classed among the undesirables and associated with the inefficient.

So we urge, that the medical men of Michigan fall in, in support of this movement. Aid your hospital officials to institute and live up to these standards. Subscribe such time and effort as may be necessary to keep complete case histories. Take the necessary extra few minutes to write your progress notes at each visit. Analyze your end results and batting average and those of your fellows and profit by them. You have erred many times and are going to continue to err, but you will not do so, so frequently or glaringly if you comply with the requirements laid down. Attend your staff meetings and contribute your experiences to the discussion of the cases presented and the policies to be adopted and enforced. By so doing help those who are at the head of our Michigan hospitals to place Michigan in the advanced line of hospital administration in this country. The time has come when we of Michigan cannot tolerate the unapproved, below the standard hospital any more than we can tolerate a class B medical college. Once more—though it may be jarring to some, we must all reconcile ourselves to this new order of things.

THE PUBLIC HEALTH NURSE.*

MISS MARY MARGARET ROCHE, R.N.

The care of the sick in their homes by visiting nurses is an ancient practice. Long before the Christian era the Jews were commanded to "visit the sick, in order to show them sympathy, to cheer and aid and relieve them in their suffering." Of course, the visiting nurse of those days was a far different person from the one who calls on the suffering now, but the idea is not a new one. In the New Testament, we find visiting the sick spoken of as one of the forms of charity. The monasteries and convents for centuries were the protectors of the poor and the sick. In the twelfth century we see the beginning of the secular orders.

Florence Nightingale, whose centennial we celebrated this month, wrote in 1865: "Nursing, especially that most important of all its branches, nursing of the sick poor at home, is no amateur work. To do it as it ought to be done requires knowledge, practice, self-abnegation, and direct obedience to and activity under the highest of all masters and from the highest

of all motives." At the time this was written the idea of public health nursing was in its prenatal state. It was not until 1877 that in the United States trained nurses were sent regularly into those homes whose sick inmates were suffering for nursing care.

The lineage of personal and public hygiene is even more ancient than the care of the sick in their homes by visiting nurses. We have only to go back to Moses and his sanitary code.

Public health nursing combines visiting nursing of the sick in their homes and instruction as to how best to secure and preserve the health of our citizens by educating them in the rules of personal health and hygiene. Where personal health is interfered with because of faulty public hygiene, the public health nurse reports the matter for correction. This definition of a Public Health Nurse seems to me to cover the subject—she is a graduate nurse doing any form of social work in which the health of the public is concerned, and in which her training as a nurse comes into play and is recognized as a valuable part of her equipment.

The qualifications that we look for in a prospective Public Health Nurse are first, health—the question of personality enters largely into the question—sympathy, optimism, neatness, initiative, and more than all else, adaptability, for in each home that she enters she will find a different problem and different temperaments with which to deal. Of the characteristics you expect every nurse to possess, you must be absolutely certain that your public health nurse is known to be, above all, loyal, truthful, industrious and discreet. Her unselfishness must be above suspicion.

Public health nursing may be likened to a tree, public health nursing, in the broad sense, is the trunk; the various subdivisions are the branches. Visiting nursing, in the beginning, was supposed to include every form of nursing. We turn to those organizations now for nursing care of sick adults, and what this means, particularly to the poor chronic patient for whom care in hospitals is hard to procure—to the public in times of epidemics—to the sick at all times, it would be impossible to put into words. They furnish industrial nursing for the factories, obstetrical nursing for the mother at home and usually do the nursing work for one of our large insurance companies. The Visiting Nurse Society is the mother of the societies that are

*Paper read before the Meeting of the State Medical Society at Kalamazoo, May 27.

doing special work. Among these there is the closest co-operation. It has been found that to do the best work, to possess the greatest strength and secure steady progress toward our ideal of perfect health for all, we must concentrate upon certain prominent weaknesses of the human race.

It is for that reason that you find the *Tuberculosis Nurse*. It is not necessary for me to dwell upon the part that Tuberculosis plays in undermining public health. We are familiar with the optimism of the patient, that in itself often makes him underestimate the necessity for effort on his part. Each situation demands individual consideration, and in securing physical health for her patient, the nurse must be constantly watchful that his independence is not being undermined. And she must bear in mind that she is to prevent Tuberculosis—that means much. No branch of public health nursing makes such demands on the courage and strength of a nurse, and no one where has she such need to be able to see above the daily round of apparently commonplace duties, the finished work. It is work that calls for the patient laying of a good foundation, so that later on the constant repetition of instruction will be well received. In no field of public health nursing is there more opportunity for service to mankind.

Infant welfare work includes, beside the care of the baby until he is two years of age, the period before—the prenatal—and the succeeding one—the pre-school age. For the prenatal nurse it is essential that she possess rare tact and sympathy. She, like the Tuberculosis nurse, must be not only willing, but eager to respond to every call made upon her time by the patients she is carrying. They may be unnecessarily alarmed, but is it not her duty to allay these fears? She must be the connecting link between the prenatal clinic and the private physician and see that the patient calls on him whenever necessary and that he is informed as to any abnormality shown by the regular urinalysis and blood pressure tests. The prenatal nurse has an exceptional opportunity to educate these women as to the value of breast feeding and to consult their doctor while in health, not just at the last moment.

The infant welfare nurse, in the strict sense of the phrase, deals with the baby from birth until he is two years of age. It is her responsi-

bility to see that he is kept well, that he is brought regularly to clinic for weighing and to have his feeding supervised, and at the first symptom of illness, that he is gotten in touch with his family physician. So often the mother will feel that she can "dose" the baby. It takes time and training to make her realize the importance of checking the disease before it starts and to depend on her physician to keep him well, not to demand that he cure the baby at once when he has been ill for days.

The child of preschool age—from two to five years old—has been one of our neglected problems. He has been between two interesting age groups and has failed to secure the necessary amount of attention. Attention at this time to nutrition, teeth, eyes, ears, save much pain later on, as well as valuable school time. It makes progress possible, and in an uninterrupted way. When he is underweight more than 7%, for his height, not age, he needs special attention paid to his daily routine and careful health habits must be formed. This is a study in itself and calls for a knowledge of child nature as well as diatetics. The awful loss our nation entails through the sacrifice of mothers and babies through the unnecessary loss of life in this pre-school period calls, in this work as in Tuberculosis prevention, for the most careful concentration and specialization. Patience, tact and love for children are essential.

The school nurse has one of the greatest opportunities to aid in Americanization. She represents to the home not only the teacher who has behind her the authority of the school board but the doctor, of whom they stand in awe as "The Professor," and the Board of Health. Of course, the nurse who works with so many groups must of necessity be able to look at her problem from each of these angles in order that order—not confusion—may result. She must love and understand children, because it is to make life safer for them that she is called upon to serve in this capacity. They must represent to her more than a basis for statistics.

Industrial nursing demands a nurse of mature judgment and attractive personality. She must be able not only to advise wisely the employes who come to her but she must of herself invite confidence. She is, in a way, the interpreter of the employer and the employe, the trusted representative of each. She must see that the employes have healthful working con-

ditions. In addition she must see that faulty health habits and poor home surroundings are corrected so far as possible and she can do much to strengthen the feeling that to the workman belongs what he *earns*, and work approached on that basis will return adequate earnings.

The Medical Social Service nurse needs beside her hospital training, a course in social service. It calls for another viewpoint. She must see not alone a patient, but an individual to be made fit for life in society and she must know what readjustments are necessary to make this possible. Without health, little avails. That must be secured him. Then, as a rule, the question of his dependency on the public for relief will be answered.

She must be able to discern among the mass of detail that goes with case histories, just what is fundamental, and she must possess those qualities that make the family look upon her not as an investigator but as a friend in a time of trouble, one who will interpret to them the wishes of the doctor in charge of the case, who will advise them how to regain financial independence. And for herself, she needs an undying faith in the wisdom of the Almighty to deal with trying conditions without wavering and to communicate to her patients some of her own steadfast belief in the ultimate goodness of the Great Plan.

A new and comparatively untried field of endeavor is that of mental hygiene nursing. The mentally ill have been for long objects of aversion. There have been few to understand them and help them to safety. This takes training of a very special kind in order that symptoms may be recognized at once and the patient placed under a physician's care, thus saving themselves and their families much discomfort.

And we have said nothing about the rural nurse. Does not this sketchy account of what each special branch of public health nursing requires give you an insight into what the rural nurse must attempt to do alone? The country provides few advantages beyond space and clean air. Its water supply is not above reproach and its sewerage system simply does not exist. It is incumbent upon us to furnish more nurses for the rural communities in order that their health may equal that of their city brethren.

And we need more nurses. Michigan's quota to be raised this year alone is 1,000. Beside the public health work there are institutions to

be operated and private duty cases to care for. In the last field, there is a marked shortage, or perhaps we should say an increased amount of appreciation of the service a nurse can render in the home. At any rate, the shortage exists. It may be practically met by the extension of hourly nursing in the homes and provided by visiting nurse associations.

The profession of nursing, in whatever branch she may be devoting her time, demands the best there is in a woman. It is not an occupation that will be remunerative and should never be entered into with that idea in mind, but it is a profession and presents an unrivalled opportunity for the woman possessed with the spirit of service to mankind. And to my mind public nursing affords the greatest field for this service. A French writer says that "To me the ideal doctor would be a man endowed with profound knowledge of life and of soul, intuitively divining any suffering or disorder of whatever kind and restoring peace by his mere presence." The nurse is the handmaid of the physician. It devolves upon her to see that his orders are carried out and when the physician, and especially the health officer, whose attitude determines so largely what advance public health nursing shall make in a community, is of this type, the spirit of service is made doubly strong and it should be all-prevailing.

GROUP PRACTICE: ITS ADVANTAGES AND DISADVANTAGES.*

The remarkable increase in medical knowledge during the last half century together with the development of collateral and coordinate sciences such as bacteriology, hygiene, sanitation, etc., has progressed to such an extent that it has become impossible for any one mind to master all these sciences. Therefore, the tendency has been toward specialization in medicine, many men giving particular attention to the study and practice of some one branch of medical science.

This results in patients being compelled to go to different physicians for different complaints, and considerable of the old time family practice disappeared. It was soon realized that it would be of advantage for physicians to associate themselves together in practice so as to correlate their work and enable a more or less

*Read by A. O. Hart, St. Johns, at the August meeting of the G. I. C.

complete examination of the human body to be made, as well as a diagnosis and treatment of each case to be carried out. Thus group practice naturally developed, that all this might be possible in one suite of offices.

The Mayo's were among the pioneers in the successful establishment of group or clinical, medical and surgical practice, and they have practically demonstrated what can be accomplished along this line. At the same time we must recognize that these men no doubt possess a peculiar genius for the financial as well as the professional part of their practice, which enabled them to succeed brilliantly where most physicians would have failed or at least not succeeded to such a marked degree.

There are no doubt many advantages in group practice and, if it is successful, the professional and financial returns are much greater than in individual practice; but the elements of such success must be given careful consideration before entering upon such an undertaking.

The first and most important element of success in group practice is exactly the same as that of individual practice in that every one entering into such a group, shall be a thoroughly well trained man in his special field and capable of engaging in private practice with marked success. Without this all efforts will surely lead to failure.

Professionally, scientific standards must be adopted and maintained for it is only by doing scientific, therefore better work than the average, that success can be assured. There must be harmony and sympathy between the various members and only that generous emulation or rivalry should exist, which endeavors to do the best work and put the best into it, rather than do the most work and get the most out of it.

There are two methods of group practice:

First—Financial and professional partnership.

Second—Professional partnership or co-operation alone, each one handling his own finances.

The first method will involve a business partnership, which will be subject to the laws and regulations governing any business partnership and which will require a written contract, carefully executed and if successful, faithfully lived up to by each and every member of the firm. For example the law is such that a member of a partnership by signing as security for an outside party obligates all the various mem-

bers of the firm for such security. Therefore, it is necessary to have a clause in the contract prohibiting any member or members of the partnership from going security for anyone or making any investment involving an obligation of security without the written consent of the other partners, such contract must also specify the exact duties and obligations of each member, methods of terminating the partnership or, eliminating any member not proving desirable. In fact, there are many things to be considered in getting up such a contract which must be carefully thought out to make it a successful business venture, pardon me, for the personal illusion but our contract as it now exists and which has been in force for over 8 years, slightly modified and revised from time to time as new members have been admitted, has during such revision been examined by lawyers expert in co-operation and contract law and they tell us that it is one of the best business on partnership contracts they have ever seen. It has been studied by several of our business and professional acquaintances about to form partnerships and as they say with great advantage to themselves. It is always open to inspection by those interested in such ventures.

In regard to the second method of group practice, we find that in larger cities many physicians are gathering in groups in office buildings suitably arranged, with each member in a separate office and each one specializing in some of the various branches of medicine, such as internal medicine, surgery, eye, ear, nose and throat, X-ray, laboratory technic, etc., so that a patient can without going out of the building have a complete examination, covering all rational and scientific lines of investigation. Then after a consultation, a diagnosis can be made and treatment arranged. Each physician will make his own charge for services rendered and collect his own fees, or if one bill is rendered, it will include the separate fee of each. This method has succeeded very well in many cases. It is probably the best plan for the great majority of physicians who desire to reap the benefit of group practice but who through lack of business training and experience would find business partnership with its demands of exact business methods and subordination of personality irksome and probably unsuccessful.

But to those men in medical practice who by nature or training are good business men train-

ed to exact business methods and of a nature able to appreciate the other man's point of view, and devoid of personal jealousy, those men, I say, may successfully associate themselves in a financial as well as a professional partnership, and thereby reap the added benefit, financial as well as professional, of such arrangement.

In our office one bookkeeper, one office nurse, one laboratory technician and one janitor take care of the routine work for four physicians and with less expense and better service than each one could maintain in a separate office. Drugs and supplies are all purchased in large quantities and at a lower price than each one could obtain if purchasing separately. Book-keeping and collections are all looked after from one desk which is also an economy, patients are better cared for as some one or more physicians are on duty at all reasonable hours. Of course, every effort is made to carry on the business end with the greatest possible accuracy, books are kept balanced, bills are discounted and collections looked after promptly. We estimate that the remuneration of each physician after expenses are paid, to be one-fourth greater than it would be if each one was practicing alone. This comes as the result, we believe, of economy of administration and the application of good business methods.

A uniform record system, modified slightly from the standard record system of the American College of Surgeons is in use and each physician is under contract to record all he does, at least in the office and all important cases seen outside. These records show history, examination, diagnosis and treatment, this to be followed by a progress and a follow up treatment record as it varies from day to day.

This enables any one of the members of the group, in the absence of the physician originally consulted, to continue the treatment of the case in a satisfactory and intelligent manner. A record is kept at the desk in the waiting room, of each patient going into each doctors office. The book charges and cash records are compared daily with this record so to check up any failure to charge or account for cash, this prevents errors in such things.

One bill is made out for each patient and this includes fees for all examinations both clinical and laboratory as well as ordinary advice and treatment. This method is found more satisfactory than separate bills from each.

The many and varied details of group practice in a personal service partnership must be worked out in harmony with the environment and conditions under which the project is to be carried out. Methods of establishing, professional co-operation in practice must also be worked out in detail in the same manner.

In closing I desire to give certain conclusions based upon personal experience as well as upon observation, which I believe to be essential to successful group practice by any method.

1. Each man entering into co-operative practice must be a thoroughly well trained physician in the specialty he is about to undertake.

2. Each must be willing to devote his time and energies to his particular branch, to see how well he can do his work and avoid and disposition to encroach upon the rights of others.

3. He must be capable of rising superior to any feeling of jealousy and should rather exalt that precept of masonry which teaches us to see who best can work and who can best agree.

4. Each one must be willing to give the best that is in him and be quick to encourage his associates to do that work to which each is best adapted.

5. Proper business methods, scientific standards of professional work and a good record system, must each be adopted and faithfully adhered to.

6. Regular consultation should be held in which all matters of mutual interest may be discussed, and plans adopted for the advancement and progress of the group. Finally there must be harmony, sympathy, respect for personality, encouragement to individual achievement, and an earnest desire on the part of each, to faithfully perform his part and to encourage the others to do the same. It is only by so doing that such success can be assured as is possible as the result of intelligent and harmonious effort.

O. A. Hart, M.D.

IMPROVEMENTS IN MEDICAL EDUCATION IN SIXTEEN YEARS.

In the August number of the Monthly Bulletin of the Federation of State Medical Boards of the United States, there appears a very interesting summary on this subject by Doctor N. P. Colwell.

During the last sixteen years, new buildings,

newer and better equipped laboratories, many more full-time teachers, greatly increased financial resources, closer relations with hospitals and dispensaries, more abundant clinical facilities and greatly improved methods of clinical teaching are everywhere in evidence.

In 1906 about 40 of the 162 medical schools were without laboratories and without clinical material. At the present time most of the medical schools have five or more well equipped laboratories and there is not one which does not have at least three laboratories. Most medical colleges now actually own or control a teaching hospital. Medical schools which have no university connection have largely disappeared. Out of the eighty-five medical schools, sixty-six are medical departments of universities.

The former amphitheater clinic has given away largely to the small group clinic in the regular operating room of the hospital or at the bedside of the patient. In the majority of medical schools patients are now regularly assigned to senior students who write the histories, make the physical and laboratory examinations and suggest the diagnosis and treatment. The teacher then usually examines each of the patients in turn before the group of students so that all students of the group benefit from the criticisms of the work done by each member of the group.

In 1905 the Council urged the medical schools to require for admission one year of college work including courses in physics, chemistry and biology. Since Jan. 1918, the requirement for admission of two years of college work has been essential for the Class A rating.

There has been some alarm that the medical schools will not be able to admit all the well qualified students who apply because of the limitation of their enrollments. In Doctor Colwell's opinion the existing medical schools are more than adequate to meet the present needs. In the future as the number of students may increase, ample provision can be made for them.

There is no dearth of physicians but there is a need of better distribution. We can easily get along with fewer doctors in the cities and use this over supply in the rural districts.

There is a real demand for medical graduates to serve as interns in hospitals but this demand could not be met even if the number of graduates annually should be trebled. The intern problem requires some other remedy:

1. The internship might be extended to eighteen months or two years by which the annual output of graduates would supply twice as many hospitals.

2. The hospitals might grant gradually increasing salaries for recent graduates to remain for several years as resident physicians or surgeons.

3. Hospital assistants or nurses might be trained to do much of the work now devolving on the intern.

4. The situation is relieved in some hospitals by the employment of stenographers who, at the time the patients are examined, take down histories from dictation by the members of the attending staff.

Meanwhile the number of hospitals seeking interns is now so large that only those will be able to secure them which are willing to furnish a valuable clinical training.

HEALTH INSURANCE IN ENGLAND.

If you think Compulsory Health Insurance agitation has subsided you are in error. Propaganda is still being resorted to and self-imposed agitators are actively engaged in attempting to secure a panel of patients for you at so much per year. The following is reprinted from the *Pennsylvania State Medical Journal*:

The following is a part of a letter received by one of our Westmore County members from an English physician who was a "buddy" of the Westmoreland County physician in France during 1918, both physicians now having returned to private practice. This letter is evidently a fair statement of the workings of the Insurance Act in England as seen by the English physician, and is worthy of careful consideration.—Editor.

When the Insurance Act was first proposed it was bitterly opposed by at least 97 per cent. of the medical men in the country.

Meetings of medicos and fighting friends and pledges, etc., were gathered and it looked as if the proposals were killed. Then Lloyd George called a meeting of representatives of all the trade unions and friendly societies and announced that if the doctors refused to come in under his scheme he had enough tame medicos to place a whole-time scheme in operation in a number of large towns with consultants, pharmacists and nurses, nursing homes, etc. This put the wind up a number, but what finally caused a debacle was the announcement that our fighting organization (the British Medical Association) had set free our secretary, Mr. Smith Whittaker, in order to become one of the government's insurance commissioners under the act. The "treachery" as it was almost universally regarded by the rank

and file was followed by a rush to put their names on the "panel" before the expiration of the time limit. Even today the name of Smith Whittaker is anathema to us and he is jeered at if he comes to our meetings. And it is the almost unanimous view that our leaders (The Council of the B. M. A.) let us down when victory was in our grasp.

So much for history. Now for the effects. There is no doubt that the majority of doctors on the panel have benefited financially by the act and are not prepared to revert to a status quo ante. The amount of work has also increased in greater proportion.

Those who have gained the most are those who had a large poor class practice and whose fees were small and irregularly paid. These men got a panel of 3,000 or 4,000 each representing a nominal £1,000 to £1,400 a year (actually about £850 to £1,200). The man who had a middle working class practice, whose patients paid him medium fees, gained nothing or perhaps lost slightly. Of course there is also private practice, e. g., the wife and children of the insured person, but there is no doubt that they will soon be brought in under the scheme.

Why then should doctors still be objecting to the act, some to the extent of coming off the panel, some who have always refused to touch it, some who are striving to get enough to join them that by coming off they can wreck it, but the majority by any agitation short of coming off? The reply is "government and law control."

The local insurance committees who work the Insurance Act are composed of representatives of the trade unions and friendly and insurance societies with a few representatives from the town council and the doctors. In Preston, with a population of 118,000 and an insured population of 50,000 to 60,000, the insurance committee consists of about 40 and the doctors have 5 representatives out of the forty. (My figures are not guaranteed accurate but are substantially correct.)

Now I don't know how you are in the U. S. A., but in this country the trade unions and working-man's societies are always aggressively hostile to professional men as a body (while quite the reverse to the individual) and they seem always on the lookout for some cause of complaint or grievance. The panel doctor is either not prescribing good enough drugs or else he is prescribing too expensive drugs, he does not go to see his panel patient quick enough, or often enough, or else he does not stay long enough. He has been treating this patient for a wrong complaint, refusing to certify this patient as "unfit" to work or else signed that one as "unfit" when he could have gone to work, etc., etc. If a doctor is out he must arrange with a proxy to attend to any emergency panel call, and if he goes away he must notify the insurance committee of some other panel doctor who will do his work. His surgery hours and accommodation must be such as will receive the approval of the insurance committee.

If any patient has a complaint, real or imaginary, against the doctor, a report is made to the

insurance committee and the doctor is called before it (or a sub-committee) and both sides are heard. If the complaint is groundless or frivolous the doctor, often wasting valuable time and being irritated by cross-examination by a butcher or baker or manual worker, is exonerated, but he gets no acknowledgment or recompense. If the complaint is justified, he is censured, or fined or struck off the panel. Perhaps the greatest crime a panel doctor can commit is to give a weekly certificate of "unfitness" and date it a day too soon or too late, e. g., a patient calls for a prescription. You give it. Then he says: "The insurance man will be coming tomorrow for the certificate. Will you give it to me to-day and then it will save me a (say) two-mile journey." You say: "Oh yes. But I must date it to-day." Oh, but I want it dated tomorrow or I shan't get my full money for this week," is the reply.

If you then goodnaturedly post-date it for a single day all the trouble begins. You have to appear before the committee, etc. One man was fined £50 and threatened that for a next offense his name would be taken off the panel.

But there is the point of view of the insured person. Is he benefited? Well, to be perfectly honest, I believe he is. The doctor is called in at the beginning of an illness, he is not afraid of paying visits or ordering medicines because of the expense, and as a result many severe illnesses are controlled from the beginning which might have got to their height "before they were bad enough to call a doctor in." Of course, you get the other side, people coming with trivial illnesses and swallowing medicine in buckets full.

To sum up, then, I believe that on the whole the result is that (1) the profession has been lowered in prestige but benefited financially; (2) lay control has been established and will probably end in complete control of medical practice; (3) the avoidance of friction with insurance committees takes precedence over the treatment of the patient.

Unless the American is different from the English and approximates more to the German type, I believe the U. S. A. will be better off without state insurance.

When it comes to representation the doctors will be in the minority.

Those who have been engaged in public work or U. S. Public Health work know how these patients, on the most trifling pretext, fabricate a bill of complaints and grievances and then the doctor has the pleasure of explaining. Every beneficiary is inoculated with the "kick-bug" and its toxins are spread far and wide.

Again we say: Doctor, remain aggressively active and do your best to spike this form of Bolshevism at every turn; do not let it get a foothold in your community.

A DISCLAIMER.

We are in receipt of the following letter:

August 9, 1920.

Dr. F. C. Warnshuis,
Sec'y-Editor, Michigan Medical Society,
Powers Theater Bldg., Grand Rapids, Mich.

Dear Doctor Warnshuis:—

On my return from vacation I found the copy of the Michigan Medical Journal with my address on health insurance printed without substantial corrections. This was done after my letter to you stating that it must not be published in that form.

I have written Dr. Frothingham asking for the responsibility for the publication of this article under the circumstances. You have deliberately misquoted me on vital matters of the greatest concern to me. For instance, you quote me as saying that I believe in health insurance because it is socialistic. Nothing could be farther from my statement. I am not a socialist and have never been a socialist. This is only a sample of numerous things that were misstated, aside from the jumble of English in which you allowed the article to be published.

I am sure that you and your Michigan Medical Society will want to make proper explanations and apologies for publishing this article in this manner. Ample opportunity will be given you to make such apologies in your magazine. The matter is of such serious consequences to me that I shall desire an early statement before taking such action as I shall be compelled to take to maintain my moral and legal rights.

Yours very truly,

John A. Lapp.

In reply to the above we advised Mr. Lapp, that galley proof of his article had been sent him, that the copy from which this was set was furnished us by the official, experienced, paid, medical convention stenographer from Chicago; that we did not receive a corrected proof until after that issue had gone to press; that that issue of the Journal was off the press before we received his letter disclaiming certain parts of the article and requesting that the article be not published. We also advised Mr. Lapp that we purposely had made no corrections in his article lest we be accused of altering the statements made therein; further, that we had arranged to print all the addresses on Compulsory Health Insurance delivered at our Annual Meeting in one issue and so included his unrevised and as given us by the stenographer. We also advised Mr. Lapp that the Michigan State Medical Society never deliberately or intentionally misrepresented anyone. Several letters on the subject have passed between us of which the following is the latest one:

September 8, 1920.

Dr. F. C. Warnshuis, Michigan Medical Society,
Powers Theater Bldg., Grand Rapids, Mich.

Dear Doctor Warnshuis:—

Your letter of September 2nd sounds more satisfactory than your previous communications. All I care to have stated is that the paper was not submitted to me in time for correction, that there are numerous inaccuracies in the facts quoted and in my views on the subject, and especially where it quotes me as saying that "if socialism is paternalism, I am for paternalism," and also where it says that I believe that vocational education caused the war.

I expect also an expression of at least moderate regret that circulation should be given to a stenographic report of an address which I consider badly garbled.

My objection to the form in which you propose to publish this is that you did not in your letter recognize that I am the injured party in this matter. You proceeded for two pages to laud the fairness of the Michigan Medical Society and your journal. Of your fundamental fairness I have no doubt but on the subject of health insurance no impartial observer would say that you were fair to your opponents. The report of your Committee, presented I understand either the day before or the day of my address, contains statements about the representatives of the Association for Labor Legislation which no fair minded person on the subject would entertain. To speak of the representatives of that Association having the purse of Fortunatus or money from unknown sources, or that what you call "uplifters" are a menace to society, or the derogatory statements of the able-bodied men named as the Social Insurance Committee cannot be said to be fair. The Association for Labor Legislation does not spend \$6,000 a year in the promotion of health insurance. This fact can be easily verified. All of its volunteers have their expenses paid by the organizations which they address. If you would take the time to examine the list of men who constitute the Council of the American Association and find out who they are you would, I am sure, not be guilty of the kind of statements you have been making in your Journal, yet you solemnly urge your members that now they have in the report of the Committee and in the addresses, all of the information which is necessary for them to understand the subject of health insurance. It is rather odd, Doctor, that men of scientific attainment can be so unscientific in analyzing a matter out of their immediate line.

Yours sincerely,

John A. Lapp.

Mr. Lapp declares that those mentioned paragraphs and statements are not his utterances and disclaims their authorship. They consequently cannot be credited to him under these circumstances; neither can he be, under his disclaimer, accused as being a socialistic agitator, by reason of the article printed in that issue of our publication.

With this statement the Journal feels that it has corrected any false position in which we may have placed Mr. Lapp by reason of printing an un-edited address. It is never our intention to misrepresent anyone. We feel that this instance was one in which we exhibited no studied attempt to misquote. In view of the exception made and the objection raised by Mr. Lapp, we feel that this statement of his attitude and concern is due him. We regret its occurrence and express our willingness to correct any misrepresentation of which we are charged. We feel that our readers now are possessed of the facts and trust that Mr. Lapp's position has been properly stated. We assure him we meant no offense.

Editorial Comments

Winter months and their accompanying respiratory diseases are at hand. May we not have some of your experiences in treating them. We desire to publish them in our December and January issues.

Did you do your part to cause your County Society to secure 100 per cent. of all the eligible non-members in your county as members? If not you still have the opportunity to help secure their applications.

County Secretaries are reminded that the 1921 State Dues will be \$5.00. Please bear this in mind when members are paying them for next year.

Are you availing yourself of the opportunity to interview legislative candidates and securing their pledges to defeat compulsory health insurance and such legislation as the various "cults" may present? Now is the time to line up your man. It is desired that you perform this service.

Down in Ohio the 2nd Councillor District conducts an Annual Chautauqua for five days. The session commences at 9:00 a. m. and continues through to 4:00 p. m. with a banquet the last evening. The entire course consists of thirty lectures on medical subjects and on this year's program we note such well known men as Patrick and Lewis of Chicago, Cannon of Boston, and Hoover of Cincinnati. A fee of \$10.00 is charged which includes the banquet.

Some of our Michigan Councillor Districts might well adopt a similar plan. We will be glad to submit the information we have at hand.

In spite of the pronouncements of idealists, efficiency experts and reformers it seems apparent that fear of the loss of their position is the greatest impetus that can induce industrial ef-

iciency. Labor's arrogant position is slowly but surely being brought to its proper level by instituting this measure. It is at present the only apparent effective means. And if we pause to reflect, that same fear of losing anything that is a necessity, be it financial, position, friends, membership, patients or what not, that we at once become active and take such steps, exert such effort as will tend to prevent such a loss. So, may we have a little more fear injected into some people and thereby abolish some of our present day unrest and unreasonableness.

We had hoped to be able to announce in this issue a list of teams composed of members that will be available for conducting County Society programs and clinics upon various medical and surgical subjects, diagnostic technic, laboratory methods and treatment. The committee is engaged in preparing such programmes and securing authoritative recognized speakers. It has been impossible to complete the work in time for this issue. However, program committees of our county societies are assured that these speakers will soon be available. Full announcement will appear later.

A meeting of all state secretaries is planned for the month of November at the headquarters of the American Medical Association in Chicago. It is purposed to discuss the problems confronting state societies and to institute a nation-wide plan of medical activity and organizational effort. Such a meeting promises to be most profitable as well as timely, especially when we observe the propaganda that is being originated by certain lay individuals to dominate and coerce the profession into certain national and state projects.

The more we ponder over the remarks of a certain New York Senator tendered to a committee of doctors in telling them: "You doctors are the dearest people, on earth, we love everyone of you. But go home and organize and then come back with your demands and we will listen to you," the more pertinent do we conclude was this advice. The problem at hand now is to make the doctors realize this need of real organization. We have all been too content with our self-satisfaction, too prone to contribute our homage to "the distinguished speaker or essayist," to willing to let Bill do the real work, too ready to reap the benefit without personal effort or contribution. We delegate our responsibility for our own and the profession's interests and welfare to the other fellow. Certain it is that as long as we continue on that course, just that long will we be the dupes and the imposed upon. Is it not about time that we did organize and assert ourselves? The scrub woman in the hospital gets more pay for her services rendered in the hospital, than you do for attending many of the patients. The plumber gets more pay for a trip to fix a water leak than you do for a professional visit to the same home to attend the child that is ill. The insurance adjuster gets more for adjusting a loss than you do for a dressing. The garage man gets more for grinding the valves of your car than

you do for a complete physical examination and so also does he get more for cleaning out the carbon in the cylinders, than you do for cleaning out a constipated, auto-toxic patient. We might continue almost *infinitum*. Neither is there need to point out the difference between the lay and professional character of the services.

The point we wish to make is that the sooner we forget that the practice of medicine is a profession and not a heaven decreed calling, the sooner that we assert ourselves, the sooner we really organize ourselves, just so much the sooner we'll rid ourselves of being the dupes of the "dear people."

And now it is purposed that the U. S. Public Health Service take over the treatment of all venereal diseases. The plan advanced is to relieve the profession of this work and cause all cases of venereal disease to be referred to U. S. Public Health Clinics by enactments empowering them to assume control of these cases. We impart this proposition without further comment but do urge that every doctor ponder for at least ten minutes upon what will result if such a provision is enacted. Then talk it over with your neighbor and **then**—well what do you think had better be done?

With a very decided improvement in instruments of precision which certainly are to be welcomed by the internist and surgeon, nevertheless, the general opinion, and particularly among pathologists and those having an opportunity to observe the post mortem diagnosis and compare it with the ante mortem diagnosis of the internist and surgeon, it would seem that this has not tended to improve the accuracy of our diagnosis. There probably is a tendency on the part of the general practitioner and the internist to allow the specialist to make his diagnosis whereas this should not be the case.

As we throw away our stethoscope and as we forget to percuss the chest, thinking information thus determined will be supplied by the roentgenologist, is it not possible that we may be avoiding our responsibility somewhat?

Correspondence

Marshalltown, Iowa, August 10, 1920.

Dr. F. C. Warnshuis, Editor,
Powers Theater Bldg.,
Grand Rapids, Mich.

Dear Doctor:—

The Cooperative Bureau has, undoubtedly, furnished you the information that you are to run several full page ads for us in the issues of the coming months.

We thank you for the Supply Houses you have mentioned and of your offer for further co-operation.

Several of the State Journals such as Missouri and North West Medicine are carrying some news items on Cellosilk in their News Columns this month. It is an advantage to the professional

reader of your Journal to inform them through this news column that there is a dressing of this kind now being prepared for them. Understand that we do not wish any free advertising, but are mentioning this as a possibility of serving your readers and at the same time bring the product Cellosilk to their attention in order that they will read the ads that we will carry in your Journal.

Several of the Supply Houses are all ready carrying Cellosilk, but so far have not done active work towards bringing it to the attention of the profession. Our purpose in advertising through the Journal is to prepare the way for easy sales by these Supply Houses.

Anything that you can do either in a personal or official capacity to bring Cellosilk to the attention of your Professional Associates will certainly be appreciated.

Very truly yours,
Marshalltown Laboratories, Inc.
V. A. M. Grew,
Advertising and Sales Manager.

September 10, 1920.

THE CONTROL OF HUMAN INFECTION CARRIERS.

To Physicians and Health Officers:

One of the most difficult problems confronting the medical profession and health officers of today is the control of disease carriers.

Epidemics of diphtheria, typhoid fever, sore throat, scarlet fever, meningitis and other diseases are continually arising and the original source can only be attributed to a carrier. These unfortunates are not clinically sick, and may never have been sick, and yet be giving off from the body virulent disease organisms, and be the cause of a severe epidemic.

To provide for the definite control of these cases and in order that there might be no misunderstanding, the Advisory Council of Health, as provided in Sec. 7, Act 146 of the Public Acts of 1919, adopted the following regulation on August 10, 1920:

"Any carrier of a dangerous communicable disease that under the rules and regulations of the Michigan Department of Health is subject to quarantine or isolation shall be isolated or quarantined as provided in said rules and regulations, and shall not be permitted to attend any school, church, theater, or other public assemblage or otherwise come in contact with the public.

The term "carrier as used herein shall be taken to mean a person who harbors in a virulent form the organisms of such diseases, and who through discharges from orifices of the body is liable to infect others with such disease."

Many of the disease organisms given off by carriers, however, are non virulent, but this can only be determined by animal inoculation and the State Laboratories are continually conducting these virulent tests.

In our letter of August 10th we suggested the value of pre-school examination of school children to discover disease carriers, if possible,

before school opened and thereby avoid an epidemic.

Many communities, where the life and health of children is of value, have followed this plan and several thousand school children in Michigan will profit this fall by this work.

From one school we received 130 swabs and five of them were of the most virulent type of diphtheria, the animals inoculated dying within a few hours.

These children are not clinically sick but they would, if not discovered, make other children sick, cost the community hundreds of dollars to care for an epidemic and possible death and desolation to several homes by the loss of loved ones.

If this work has saved the life of only one child in the State of Michigan, it is well worth the money cost and effort.

For your convenience we are enclosing a short bibliography of current literature on "Carriers."

Cordially,

R. M. Olin, M.D.,

Collaborating Epidemiologist, U. S. Public Health Service.

Deaths

Doctor Richard J. Hamlen died September 9, 1920, at his home in Detroit. The Doctor was born in 1862 at West Nanosh, Ontario. He came to Detroit in 1880 and graduated from the Michigan College of Medicine and Surgery in 1892. For thirty years he has been medical examiner for the Foresters of America. He was a member of the Wayne County Medical Society, Michigan State Medical Society and the American Medical Association. At the time of his death, he was Grand Chief Ranger of the Grand Court of Michigan Foresters of America.

Doctor Stanley J. Lukaszewski was born in 1874 and died in Detroit September 11, 1920. He graduated from the Chicago College of Medicine and Surgery in 1906. The Doctor was one of the leading Polish physicians in the city of his adoption. At the time of his death, he was a member of the Wayne County Medical Society, the Michigan State Medical Society and the American Medical Association.

Doctor W. H. Niles, of Marshall, was killed in an automobile accident on August 18th.

Doctor Niles had practiced in Marshall four years and was thirty-five years of age. He is survived by the widow and a three year old daughter.

State News Notes

For Sale, house with office attached, barn and garage. Value \$5,000. No better country and small village practice anywhere in the State, ten grade school, electric lights, two churches, etc., in village of Orleans, Ionia County. Reason for selling, moving out of State. Price \$3,000, half down, balance mortgage at 6%. Write Journal for further particulars.

For Sale—Bay City, Michigan. Eye, ear, nose and throat practice and office equipment. Mrs. H. Beach Morse, 1602 9th St., Bay City, Mich.

COLLECTIONS.

Physicians Bills and Hospital Accounts collected anywhere in Michigan. H. C. VanAken, Lawyer, 309 Post Building, Battle Creek, Michigan. Reference any Bank in Battle Creek.

Block for sale—The two-story office and residence block of the late Dr. E. P. Partlow of Constantine, Mich., for sale. Dr. Partlow left a good practice with residence and office well located and in fine condition. Any physician looking for a good location and able to purchase office and residence block write W. F. Thomas, Administrator, Constantine, Mich.

For Sale—Unopposed village and country practice—collections \$5,000.00 to \$6,000.000 yearly—office and residence combined, private electric light and water system; furnace heat, hot and cold water, bath, toilet inside; prosperous farm and dairying community, 7 miles from good hospital. Stone roads, price \$2,500.00—\$1,000.00 cash, terms to suit on balance, interest 6%. Cost over four thousand. All in good condition. Dr. W. L. Peters, Jasper, Mich.

September 15, 1920.

To the Members of the House of Delegates of the American Medical Association:

In its report to the House of Delegates at the New Orleans meeting of the Association, the Board of Trustees incorporated these two paragraphs under "Increased Expenses":

"The steadily increasing cost of production is likely to cause serious concern if it continues much longer. As an illustration we might refer to the price of paper used in The Journal. A reference to the auditor's report for 1918 will show that paper for The Journal that year cost approximately \$162,000. Last year—1919—it was over \$217,000—an increase over the preceding year of approximately \$55,760. There was an increase in circulation, but this was small as compared with the increase in cost of paper. We entered this year with a still further increase; at the lowest estimate, our paper for the current year will cost in the neighborhood of \$35,000 more than last year, even though there should be no further increase. Wages in the printing trade are still advancing; an increase that went into effect last February, 1920, adds at least \$22,000 to the pay in the printing department. The increase in these two items

alone—paper and labor in the mechanical department—will add at least \$57,000 to the expense this year. In addition there is a steady increase in the wages for all the other help—stenographers, typists, clerks, etc.

"While there is no immediate cause for anxiety, it is well for us to realize that we must be prepared for whatever the future may have in store. It may be necessary either to increase the subscription price of *The Journal*—say \$1.00 a year—or to reduce its size. However, this is for the future. Your attention is called to these matters that you may know the conditions that have developed and which are developing."

Although, during the last three or four years, there has been a steady increase in wages, in cost of paper and of everything used in the printing line, it was the earnest desire of the Trustees, and other officers of the Association, to get along without either raising the price of *The Journal* or reducing its size. However, since the preparation of the last report of the Trustees, from which the above quotation is made, there have been three increases in the cost of paper—one covering March and April, one covering May and August, and a third went into effect September 1. These increases amount approximately to a 25 per cent. increase since the first of March. Based on these increases, we estimate that our paper for this year will cost between \$75,000 and \$80,000 more than last year.

On August 25, there was another increase of \$5.00 a week affecting compositors, linotype operators, pressmen, pressfeeders, etc.; this makes an increase of \$10.00 a week since the first of this year. Of course there also has been an increase in the scale for office employees. We can not estimate the future from the past, but from present prospects no decrease in these expenses are to be expected.

Summarizing: Our paper today is costing 154 per cent. more than at the end of 1914; and labor in the mechanical departments has increased approximately 135 per cent. in the same time.

It is now realized that unless the price of *The Journal* is raised (two dollars is suggested) for 1921, it will be necessary to go very deeply into our reserve fund—and even this would not suffice for long if present conditions continue. It is, therefore, necessary that the situation be met immediately, the great majority of the Fellows remit during the first two or three months of the year, and if action on this matter is postponed until the Boston meeting it will mean that there will be practically no increase in receipts for dues or subscriptions during the year 1921, since any action taken at the annual session could not be made retroactive. The Trustees, therefore, are unanimously of the opinion that a special meeting of the House of Delegates should be called to consider modification of the following by-law so as to permit of increasing the dues and subscription, and that this meeting should be held in time to have the new rates promulgated not later than the first of December of this year:

CHAPTER XVII.—Annual Fellowship Dues: The annual Fellowship dues shall be five [seven] dollars, payable in advance on the first day of January of each year, of which not less than four [six] dollars shall be credited to the subscription for one year for *The Journal*.

It is proposed that the following modification be made in the above Chapter:

Change the word "five" in the first line to "seven," and the word "four" in the third line to "six."

If any further changes are considered necessary they can be presented at the meeting in Boston next June.

It is suggested that the opportune time for such a meeting of the House of Delegates would be in connection with the meeting of State Secretaries, which is to be held at the Association headquarters in Chicago, November 11-12; at least ten of the state secretaries are also delegates. If the meeting of the House of Delegates were held at that time it would insure the presence of at least ten delegates, and it should, therefore, not be difficult to have a quorum in attendance.

Special sessions of the House of Delegates are provided for in Section 2, Chapter III of the By-Laws:

"Special sessions of the House of Delegates shall be called by the Speaker on written request of twenty-seven or more delegates, representing a majority of the constituent associations. When a special session is thus called, the Secretary shall mail a notice to the last known address of each member of the last House of Delegates at least twenty days before such special session is to be held, in which notice shall be specified the time and place of meeting and the items of business to be considered. No other business shall be transacted at the special session than that specified in the call."

"Quorum.—Twenty voting members of the House of Delegates shall constitute a quorum."

Enclosed will be found two slips—one for a mail vote on the proposition of modifying the by-laws to increase the annual dues; the other a petition to the Speaker of the House of Delegates to call a special meeting for the purpose specified. The petitions will be transmitted to the Speaker by the Secretary of the Association. As the time is short, if the meeting is to be called on the dates mentioned above, will you please act promptly? Stamped, directed envelope is enclosed for your convenience.

The mail vote on the proposition of increasing the annual dues is simply to obtain an expression of the opinion of all the members of the House of Delegates for the benefit of those who may attend the special session; it has no legal force.

This communication is issued on the authority and by direction of the Board of Trustees of the American Medical Association.

ALEX. R. CRAIG,

Secretary, American Medical Association

FRANK BILLINGS,

Secretary, Board of Trustees of the A. M. A.

GEORGE H. SIMMONS,

Editor and General Manager

Resolution adopted by the House of Delegates of the Ohio State Medical Association, at its last annual meeting, held in Toledo, June 1, 2, and 3, 1920.

"Whereas, in our forty-eight states there are as many separate medical examining boards, and

"Whereas, licensed physicians in one state may not always practice in other commonwealths without vexatious examinations and expense, and

"Whereas, the government in time of war frequently sent physicians into army camps in other states, and therefore disregarded state boundaries, and

"Whereas, there is practically homogeneity in the anatomical and psychological makeup of the people in the various states, and

"Whereas, the same may be said of the physicians throughout the land.

"Therefore, be it resolved, that it is the opinion of the House of Delegates that the right to practice in one state should be extended to include the right to practice medicine in any part of the United States.

"Be it further Resolved that a copy of this resolution be sent to the proper officials of all medical societies, and to national and quasi-national medical associations, and that the American Medical Association be especially urged to perfect a plan by which inter-state medical practice be made as easy as inter-state commerce."

E. V. Nelson and W. L. Leonberger of Marquette, chiropractors, who were found guilty during the last term of the circuit court of practicing medicine without a license in violation of the state law, have paid the fines imposed on them by Judge Flannigan and have abandoned their business in Marquette County. When these verdicts were reached in these cases, Judge Flannigan granted the chiropractors' attorneys sixty days in which to file an appeal. After careful consideration of the evidence however the attorneys decided not to appeal and their clients paid their fines.

Mr. Nelson who has been practicing his profession in Marquette more than a year, closed his office the first part of September and has gone West. Mr. Leonberger who maintained an office in Negaunee has gone to Wisconsin.

These chiropractors hired an able attorney, counsel for the National Association of Chiropractors, to come to Marquette and fight their cases. His defense was made on the ground that the chiropractor's business is not medical practice within the meaning of the Michigan Medical Act. After the case had gone against him it was thought probable that he would start an appeal on the ground that the Statute was unconstitutional. The fact that no appeal was taken, is regarded as evidence that the chiropractors' attorney came to the conclusion that Michigan laws will not permit "spine manipulators" to operate and that if they continued their practice, it would be in violation of the law.

Doctor W. C. C. Cole has associated himself with Doctor T. B. Cooley of Detroit in the practice of pediatrics. Doctor Cole is a graduate of the University of Minnesota Medical Department. He has held a teaching fellowship in its pediatric department. Before he came to Detroit he was

associated in private practice with Professor Sedgewick, head of the department of pediatrics in the University of Minnesota.

At the request of the late Doctor J. H. Carstens, Doctor E. K. Cullen was appointed several months ago acting head of the Department of Gynecology in the Detroit College of Medicine and Surgery for 1920-1921.

Doctor R. M. Athay, a graduate of the Medical Department of Northwestern University, has recently become associated in practice with Doctor Guy L. Kiefer, of Detroit.

Dr. Angus McLean has returned home from Europe, where he has been attending the International Congress of Surgeons.

Dr. J. I. Case of Battle Creek has been cited for meritorious and conspicuous service during his military service.

Dr. Clyde Reynolds has assumed charge of the health service of the Lansing Agricultural College.

Dr. B. A. Shepard is planning a new and enlarged tuberculosis sanitarium just outside of Kalamazoo.

A psychopathic hospital is being urged for Detroit.

Manistique is fathering a movement for the establishment of a local hospital.

Dr. C. F. Girard has been appointed health officer for Powers township.

Charlevoix Hospital is enlarging its capacity.

Dr. J. M. Blackman has located in Morenci.

COUNTY SOCIETY NEWS

It is the Editor's desire to have this department of the Journal contain the report of every meeting that is held by a Local Society. Secretaries are urged to send in these reports promptly

ALPENA COUNTY.

Thursday, August 17, occurred the annual picnic and frolic of the Alpena Medical Society. Seventeen doctors, their wives and a few invited guests sat down to a delicious dinner at the Grand Lake Hotel, seventeen miles from Alpena. The evening was spent in social conversation, everyone reporting the best of time. It is hoped that the Petoskey Medical Society will take

charge of the Sept. meeting and furnish the program.

C. M. Williams, Secretary.

GENESEE COUNTY.

The Genesee County Medical Society held no meeting during July and August but had two social gatherings with the object of promoting good will among our friends in the Pharmaceut-

ical and Legal professions. On August 25th the physicians and pharmacists of Flint held a picnic at Lake Orion. A ball game, a dance and other sports made it a very enjoyable day. On Sept. 2nd the physicians met at luncheon with the lawyers Club. A musical program was provided and several good speakers entertained us. Dr. H. E. Randall and Dr. C. B. Burr spoke for the doctors. Judge J. O. Murfin, of Detroit, Pres. of the Michigan Bar Association, spoke very entertainingly, and especially urged that our professions should support the movement to secure better remuneration for our teachers, public school, high school and college. It will be remembered that our society had a joint meeting with the dentists last spring. We believe that these joint meetings are not only enjoyable but profitable for there is no city in the State where a better feeling exists among professional men than in Flint.

W. H. Marshall, Secretary.

MENOMINEE COUNTY.

Annual Meeting of Upper Peninsula Medical Society.

The 24th annual meeting of the Upper Peninsula Medical Society was called to order in the American Legion Club rooms August 25th promptly at ten o'clock by Dr. R. A. Walker, president of the Menominee County Medical Society, who greeted a very satisfactory audience for the morning meeting of the first day.

The members were welcomed by the Hon. M. J. Doyle, Mayor of Menominee in an address that was very well received, in which the Mayor emphasized the importance of co-operation between the civic authorities and the medical profession and stated that the health of the community benefited greatly by such co-operation.

After the address of welcome our president, Dr. Harry W. Long, was presented who read a somewhat reminiscent and very interesting paper on "The Changing World of Medicine."

The scientific program was admirably opened with a masterly paper by Dr. David Littlejohn, of Ishpeming, on "Civic Activities in Public Health" which was a most excellent exposition of the subject. The character of this paper prompted Dr. A. W. Hornbogen to offer a motion that the papers read at this meeting be turned over to the secretary to be forwarded by him to the Journal of the State Medical Society. This suggestion was adopted. The paper was generally discussed by Drs. Long, Hornbogen, Fischer, Lawbaugh, Mayor Doyle, and Drs. Walker, McComb and Littlejohn.

The minutes of the Escanaba meeting were

read and accepted, after which a business committee composed of Drs. Hornbogen, Hicks, and Miller was appointed.

The afternoon session was opened by Dr. Hornbogen who read a paper by Dr. F. McD. Harkins of Marquette on "The Drum-head Membrane in Obstetrics" which was discussed by Drs. Hornbogen, Lawbaugh, Larson and Dohearty. Dr. Fischer of Hancock then favored us with a "Sermonette on Tuberculosis" which was of the same excellent type that we always expect from Dr. Fischer and which was most cordially received by the Society. The discussion was led by Dr. Lawbaugh and followed by Drs. Hornbogen, Bennie, Littlejohn, Hicks, Anderson, Sawbridge, and Fischer.

The paper of the dean of our profession, Dr. A. I. Lawbaugh, of Laurium, "Too Late and Too Early in Abdominal Surgery" caused probably the most general discussion of any paper presented at the meeting. It is needless to say that it was a masterful effort and backed by such ripe experience was very valuable. The question of acute abdomen always provokes active discussion among surgeons and this was no exception. Drs. Hitchen, Anderson, Hornbogen, Orr, Mehlig, Hicks, Walker, Whiteshields and Lawbaugh participated in the discussion.

The Percy method of blood transfusion was then described and the instruments demonstrated by Dr. L. P. Mehlig of Sault Ste. Marie. His paper was fully discussed by Drs. Fischer, Anderson and Mehlig.

The mistakes in diagnosis were commented on in a paper by Dr. E. V. McComb of Menominee which in his absence was read by the secretary. These papers are always valuable as questions of diagnosis and prognosis are so often more forcibly impressed by mistakes than by brilliant success.

The afternoon program concluded with a very practical address for the general practitioner on "Acute Otitis Media—Diagnosis, Treatment and Complications" It was a paper which deserved a full discussion because of its value and the admirable way in which the important question was presented but was discussed only by the other ear men present.

In the evening a banquet was tendered the guests at the Hotel Menominee by the Menominee County Medical Society. About forty members gathered around the festive board and a right good time was had with the president of the Menominee County Medical Society, Dr. Walker, as toastmaster. The banquet was dry only inasmuch as it lacked liquid refreshment of the long ago but we made up for this with some

excellent talks by the after dinner orator of the Upper Peninsula Medical Society, Dr. Miller, of Gladstone, by Roger M. Andrews, of Menominee, our retiring president, Dr. Harry W. Long, and several others. A most enjoyable musical program was directed by the Drs. Boren, of Marinette.

Thursday morning the association convened in the lecture room of the Spies Public Library and was opened with an instructive and interesting paper by Dr. L. M. Finch of the Morgan Heights Sanitarium, Marquette, read by Dr. Fischer, of Hancock.

The business committee then reported that they were not in a position to recommend a place of meeting as the popularity of our Society was demonstrated by the fact that there were three invitations for the 1921 session, from Iron Mountain, Ishpeming, and Marquette. In view of the fact that the meeting next year will be the silver jubilee of the society, which was organized in Marquette, the other candidates for the honor of entertaining us gracefully withdrew and Marquette was unanimously selected. The committee then recommended as the officers for the ensuing year Dr. R. A. Walker, President, Dr. F. McD. Harkins of Marquette, First Vice-President, and Dr. W. J. Anderson of Iron Mountain, Second Vice-President. This recommendation was unanimously adopted. The resolution of thanks to the Menominee County Medical Society for its entertainment was also presented and unanimously adopted.

Dr. A. S. Kitchen, of Escanaba then demonstrated a case in which an arm so seriously injured that amputation would by many be considered inevitable, had been saved leaving the man with a very good hand. The demonstration was accompanied by a most instructive paper which was discussed by Drs. Walker, Anderson, Redelings, Mehlig, Larson, and Kitchen.

Dr. Hicks then gave an information talk on the U. S. Public Health Service and its care of disabled soldiers, the purpose being to emphasize to the physicians who were not associated with the U. S. Public Health Service that an honest and earnest effort is being made to play fair with the ex-soldiers and do all that is possible to restore him to his former health and vigor. His talk was discussed by Drs. Anderson, Walker, Elwood and Larson.

The following members of the Upper Peninsula Medical Society who have moved to other fields of endeavor were then unanimously elected honorary members: Dr. Beverly D. Harrison, of Detroit, Dr. Carl F. Moll, of Flint, and our retiring President, Dr. Harry W. Long, Gary, Ind.

After this a thoroughly enjoyable meeting of the Upper Peninsula Medical Society was adjourned.

C. R. Elwood.

SANILAC COUNTY.

On Monday, Sept. 6 the members of Sanilac County Medical Society met at the summer home of Dr. B. E. Brush, of Port Huron, at Lexington, Michigan.

W. A. Hackett, M.D., F.A.C.S., of Detroit, gave an excellent and instructive address on "Fractures" and E. E. Lewis, M.D., of Port Huron, gave a paper on "X-Ray Treatment of Exophthalmic Goitre."

The addresses were well rendered and showed that the speakers had a thorough grasp of their respective subjects.

On this occasion the members of the Society with their wives were the guests of Dr. and Mrs. Brush.

Some forty in number sat down to an excellent chicken and fish dinner, provided through the courtesy of Dr. Brush, at the Lexington Hotel, when a splendid time was spent.

Besides the members of the County Organization, guests were present from Port Huron, Detroit, Imlay City and Richmond.

All expressed themselves as having been really entertained, and the occasion will long be remembered by those whose good fortune it was to be present.

Great credit is due Dr. Brush, he having spared no trouble by way of entertainment for his guests and all agreed that he made an excellent host.

The meeting was one of the most successful yet held by the organization. A unanimous vote of thanks was extended Dr. Brush and the speakers.

The next meeting is to be held at Sandusky, in October.

J. W. Scott, M.D., Secretary.

Book Reviews

THE FUNDAMENTALS OF HUMAN ANATOMY. Marsh Pitzman, A. B., M.D., Professor of Anatomy, Washington University. Cloth, 356 pp. Price \$4.00. C. V. Mosby Co.

This text discusses the relation of anatomical structures in diseased conditions from a medical viewpoint and hence is the viewpoint of the practitioner. The common fault exists that the man not doing surgery considers that he can well forget and ignore anatomical relationship. He does not recognize that anatomy has an equally important bearing in his treatment of disease as it has to the surgeon in his operative work.

It is an excellent text and one which we most heartily recommend.

PERSONAL BEAUTY AND RACIAL BETTERMENT. Knight Dunlap. C. V. Mosby Co. Price \$1.00.

A presentation of the central problems of eugenics.

HYGIENE, DENTAL AND GENERAL. Clair E. Turner, Asst. Professor of Hygiene, Tufts Medical College. Cloth, 400 pp. Price \$4.00. C. V. Mosby Co.

This work is essential for the dentists and correlates body hygiene and how to maintain it with the hygiene and prophylaxis of dental work. As such it is a very useful text which a physician should read with much profit.

EXOPHTHALMIC GOITRE AND ITS NON-SURGICAL TREATMENT. Israel Bram, M.D., Instructor in Clinical Medicine, Jefferson Medical College. Cloth, Price \$5.50. C. V. Mosby Co., St. Louis, Mo.

When the reviewer first picked up this book he settled himself with an expectant attitude of pleasant anticipation that the text before him would reveal a discussion of exophthalmic goitre from a new standpoint and would impart substantiated observations upon the non surgical treatment.

We are forced to admit that we were keenly disappointed and surprised at the complete absence of everything that might justify the waste of paper that occurs in publishing this text.

Nothing new in the discussion of the disease, old, long forgotten formulas for medical treatment, external and internal, rambling by comments, diet lists and similar obsolete material. In some of the case histories we are even inclined to think that other diagnosis might fit them better.

It has been a long time since we have been so disappointed in a text.

Miscellany

TO PHYSICIANS AND HEALTH OFFICERS.

The recent efforts by this Department to revise the tuberculosis records disclose the fact that the law is, in many cases, being disregarded, and for this reason your attention is invited to the following provisions of the law.

Physicians are required to report to the Health Officer every case of tuberculosis that shall come to his knowledge, within twenty-four hours. He is not to assume that a case has been or will be reported by some one else; if he makes the diagnosis, he should report the case. The law allows the physician fifty cents (paid by the State) for every complete report.

Health officers are required to transmit all reports within twenty-four hours to the Michigan Department of Health and to register all cases in a book furnished by this Department for that purpose, which book shall not be open to inspection by any one except the state or local health authorities.

The law provides for the disinfection of all premises after death, recovery or removal of a person who has had tuberculosis.

Cases must be reported without waiting for positive laboratory reports, as this only affects the method of handling the case and not the question of reporting. No matter what part of the body may be affected—the meninges, spine, intestines, bones or any other organ—they are all reportable, the same as tuberculosis of the lungs.

The law also provides for a report of the termination of a case, that the premises may be disinfected. This would mean the death, removal or recovery of the case, and such report should be promptly forwarded to the Michigan Department of Health, in order that your jurisdiction may be duly credited and the case be no longer charged thereto.

If health officers have not been keeping complete records, as required by law, or have not a register furnished by this Department, they should at once get their record started and keep it up, so that they may not put themselves in a position which may come in conflict with the law.

Physicians are expected to comply strictly with the law in making reports. The Department would deplore the necessity of legal action, but cannot be expected to overlook violations of the laws, with the enforcement of which it is directly charged.

The law provides a penalty of a fine of not more than one hundred dollars for failure on the part of any physician to report a case of tuberculosis, also a fine of not less than five nor more than fifty dollars for the violation of any provisions of the act.

The Department has recently taken over the Clinics formerly conducted by the Michigan Anti-Tuberculosis Association and is now arranging to conduct Clinics for Tuberculosis and Diseases of Children, and will be glad to take the matter up in those communities having local Tuberculosis Associations, active Red Cross Chapters, Welfare Organizations, or other bodies which are organized to follow up the work started by the clinic.

The one purpose of all reports, clinics and educational work is to reduce the misery and suffering caused by tuberculosis and save the lives of Michigan citizens. It is only thus that we can do our duty as health officers and physicians.

Remember that every uncared-for case of tuberculosis infects three others before it dies.

Cordially,

R. M. Olin, M.D.,
Collaborating Epidemiologist,
U. S. Public Health Service.

ABSTRACT.

Mental Equipment—

An adequate study of the mental make-up or equipment must cover at least five aspects.

1. Age Level Tests (General Ability.)

Advantages:

- a. It admits of ready comparative studies as it is a method of very common use.
- b. It estimates so-called intelligence (general ability.)

c. It classifies in terms of mental age or intelligence quotients.

Disadvantages:

a. Results are not always reliable for they are influenced by special abilities or disabilities (A good or poor auditory memory span raises or lowers the score unduly).

b. Educational and cultural opportunities play a large part in success or failure on some of the tests (understanding and use of language and certain vocabulary affects the final score.)

c. Special abilities and disabilities are left totally or largely unrevealed (almost entirely the scale deals with ability to deal with ideas but gives no hint as to ability to deal with things and with persons).

d. The final score may be readily misinterpreted.

2. Special Abilities and Disabilities

We are especially interested in revealing the abilities that can be utilized educationally, vocationally and socially.

Abilities:

a. Mechanical ability (hand-minded rather than book-minded) (The ability to deal with things rather than ideas and with concrete material rather than abstract.)

1. Simple manual dexterity (ability to use hands skillfully and quickly) (Unskilled factory work as packing and pasting.)

2. Mechanical skill (dexterity plus ability to deal with problems presented in concrete material) Repair work when parts of a machine must be put together)

3. Planfulness, resource and originality in dealing with concrete material (Inventor or mechanical engineer)

b. Ability in field of language.

c. Ability in visualization (draftsmanship).

Disabilities:

It is important to find these out.

3. Functioning of the Mind—The Dynamic Aspect—When the mental abilities have been ascertained, the question arises how well with these abilities does the mind function? What is the individual's mental ability? How great is the capacity output?

4. Personality Make-Up:

It is often very difficult to determine what is the innate personality make-up and what is the result of environment and experience.

5. Mental Content:

What forms the content of one's mental life? What are his interests, his ideals and ambitions? What ideation is more or less recurrent? Does he have Day Dreams and of what do they consist? Is he subject to obsessive thoughts or imagery?

(Mental Hygiene July 1920, Augusta Bronner.)

ABSTRACT.

Mental Deficiency—

Of the 72,323 cases of nervous and mental disorders identified by the neuropsychiatric examin-

ers of the Medical Corps of the army detailed in the United States, 22,741 or 31.4%, were mental defectives. The mental defect was so pronounced that the bulk of these recruits were considered unfit for any kind of service (military). They constituted nearly one-third of all the rejections for nervous or mental causes, and were far more numerous than any other single clinical group. If the mental defectives rejected at the local boards are added to those rejected at camps, the total number of individuals seriously handicapped by mental defect brought to light by mobilization reaches 26,545.

Mental defect is approximately three times more frequent than drug inebriety, concerning the terrors of which the press keeps us constantly informed; it is twenty times more frequent than disabling alcoholism to prevent which our federal Constitution has been amended; it is three times more frequent than insanity, in provision for which there is a general quickening of interest throughout the country and for the cure of which at least half a dozen of our states have developed systems of the highest order of merit.

How many mental defectives are there in the United States? The answer to it vouchsafed by army figures, while perhaps not absolutely accurate, may be not far from correct. If the number of men examined be approximated at 3,500,000, there would be a ration of 6.5 defectives for every 1,000 men examined. The number of cases discovered at the local boards is so small that the preceding ratio may be used in estimating the number of mental defectives between the ages of twenty-one and thirty-one years, exclusive of those confined in state and private institutions. There were 10,101,506 registrants between the ages of twenty-one and thirty-one and the ratio of 6.5 per 1,000 would give for this number 65,659 male mental defectives of the given age period. If mental deficiency ran uniform among persons of all ages there would be 353,210 male defectives in the United States. As a matter of fact, we know that mental defect, by reason of the high mortality incident to it, especially in youth, has a greater incidence in groups under eighteen years than in those over it. So it seems evident that the estimates drawn from adults would understate the number as related to the entire population.

In the classification of the mental defectives discovered in the army the conventional definitions were employed: an imbecile was considered as one capable of guarding himself against physical danger, but incapable of earning a living, a moron as one capable of earning a living under favorable circumstances, but incapable of competing on equal terms with his normal fellows. No idiots came under the observation of the neuropsychiatric officers and among the whites the morons constituted approximately two-thirds of the total, the imbeciles one-third. The negroes showed a higher percentage of grave defects as among them the imbeciles totaled 48.4% and the morons sank to 50.7%. (Mental Hygiene, July 1920, Pearce Bailey and Roy Haber.)

Adrenalin in Medicine

2—Treatment of the Paroxysm of Asthma

THE fact that Adrenalin promptly relieves the paroxysm of bronchial asthma has been demonstrated in thousands of cases. Explanation of its mode of action, however, must be couched in the language of probability and speculation, because the pathogenesis of the disease is the subject of an ever-increasing number of theories and much controversy.

Among the more reasonable and credible of these theories are: 1, Anaphylactic manifestations in the bronchial mucosa from bacterial protein sensitization; 2, The same condition produced by sensitization to food proteins (allergy), pollens of plants and animal emanations; 3, Reflex vagus irritation of the bronchial mucosa from peripheral afferent impulses originating along the course of distribution of this nerve.

It is not unlikely that every case of bronchial asthma can be explained by one of these theories, and that, indeed, in some of the cases more than one of these factors are underlying. Regardless of the theory or theories applicable to any given case, the immediate mechanical cause of the distressing paroxysm is a sudden spasmodic stenosis of the bronchioles.

The action of Adrenalin

is to relieve this stenosis. Whether the dilator muscles of the straitened tubules are stimulated or the circular constrictor muscles are temporarily paralyzed by Adrenalin to bring about this change in the calibre of the bronchioles cannot be definitely stated. It is interesting to note in connection with the protein sensitization theory that anaphylactic phenomena elsewhere in the body are often favorably influenced by Adrenalin—especially in respect to the skin manifestation, urticaria.

Adrenalin is the best emergency remedy for the treatment of the asthmatic paroxysm at the command of the physician. Two to ten minims of Adrenalin (1:1000) are given subcutaneously, or preferably intramuscularly. Frequently only five or ten seconds elapse after the injection when partial alleviation of the dyspnoea is noticed. In a few minutes relief is complete. Adrenalin acts quickly or not at all. In those few cases in which no favorable effect becomes apparent after the first injection this medication should not be pushed. Some practitioners have noted that the injection of Pituitrin in combination with Adrenalin (equal parts) enhances and prolongs the action of the latter.



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c. It classifies in terms of mental age or intelligence quotients.

Disadvantages:

a. Results are not always reliable for they are influenced by special abilities or disabilities (A good or poor auditory memory span raises or lowers the score unduly).

b. Educational and cultural opportunities play a large part in success or failure on some of the tests (understanding and use of language and certain vocabulary affects the final score.)

c. Special abilities and disabilities are left totally or largely unrevealed (almost entirely the scale deals with ability to deal with ideas but gives no hint as to ability to deal with things and with persons).

d. The final score may be readily misinterpreted.

2. Special Abilities and Disabilities

We are especially interested in revealing the abilities that can be utilized educationally, vocationally and socially.

Abilities:

a. Mechanical ability (hand-minded rather than book-minded) (The ability to deal with things rather than ideas and with concrete material rather than abstract.)

1. Simple manual dexterity (ability to use hands skillfully and quickly) (Unskilled factory work as packing and pasting.)

2. Mechanical skill (dexterity plus ability to deal with problems presented in concrete material) Repair work when parts of a machine must be put together)

3. Planfulness, resource and originality in dealing with concrete material (Inventor or mechanical engineer)

b. Ability in field of language.

c. Ability in visualization (draftsmanship).

Disabilities:

It is important to find these out.

3. Functioning of the Mind—The Dynamic Aspect—When the mental abilities have been ascertained, the question arises how well with these abilities does the mind function? What is the individual's mental ability? How great is the capacity output?

4. Personality Make-Up:

It is often very difficult to determine what is the innate personality make-up and what is the result of environment and experience.

5. Mental Content:

What forms the content of one's mental life? What are his interests, his ideals and ambitions? What ideation is more or less recurrent? Does he have Day Dreams and of what do they consist? Is he subject to obsessive thoughts or imagery?

(Mental Hygiene July 1920, Augusta Bronner.)

ABSTRACT.

Mental Deficiency—

Of the 72,323 cases of nervous and mental disorders identified by the neuropsychiatric examin-

ers of the Medical Corps of the army detailed in the United States, 22,741 or 31.4%, were mental defectives. The mental defect was so pronounced that the bulk of these recruits were considered unfit for any kind of service (military). They constituted nearly one-third of all the rejections for nervous or mental causes, and were far more numerous than any other single clinical group. If the mental defectives rejected at the local boards are added to those rejected at camps, the total number of individuals seriously handicapped by mental defect brought to light by mobilization reaches 26,545.

Mental defect is approximately three times more frequent than drug inebriety, concerning the terrors of which the press keeps us constantly informed; it is twenty times more frequent than disabling alcoholism to prevent which our federal Constitution has been amended; it is three times more frequent than insanity, in provision for which there is a general quickening of interest throughout the country and for the cure of which at least half a dozen of our states have developed systems of the highest order of merit.

How many mental defectives are there in the United States? The answer to it vouchsafed by army figures, while perhaps not absolutely accurate, may be not far from correct. If the number of men examined be approximated at 3,500,000, there would be a ration of 6.5 defectives for every 1,000 men examined. The number of cases discovered at the local boards is so small that the preceding ratio may be used in estimating the number of mental defectives between the ages of twenty-one and thirty-one years, exclusive of those confined in state and private institutions. There were 10,101,506 registrants between the ages of twenty-one and thirty-one and the ratio of 6.5 per 1,000 would give for this number 65,659 male mental defectives of the given age period. If mental deficiency ran uniform among persons of all ages there would be 353,210 male defectives in the United States. As a matter of fact, we know that mental defect, by reason of the high mortality incident to it, especially in youth, has a greater incidence in groups under eighteen years than in those over it. So it seems evident that the estimates drawn from adults would understate the number as related to the entire population.

In the classification of the mental defectives discovered in the army the conventional definitions were employed: an imbecile was considered as one capable of guarding himself against physical danger, but incapable of earning a living, a moron as one capable of earning a living under favorable circumstances, but incapable of competing on equal terms with his normal fellows. No idiots came under the observation of the neuropsychiatric officers and among the whites the morons constituted approximately two-thirds of the total, the imbeciles one-third. The negroes showed a higher percentage of grave defects as among them the imbeciles totaled 48.4% and the morons sank to 50.7%. (Mental Hygiene, July 1920, Pearce Bailey and Roy Haber.)

Adrenalin in Medicine

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Among the more reasonable and credible of these theories are: 1, Anaphylactic manifestations in the bronchial mucosa from bacterial protein sensitization; 2, The same condition produced by sensitization to food proteins (allergy), pollens of plants and animal emanations; 3, Reflex vagus irritation of the bronchial mucosa from peripheral afferent impulses originating along the course of distribution of this nerve.

It is not unlikely that every case of bronchial asthma can be explained by one of these theories, and that, indeed, in some of the cases more than one of these factors are underlying. Regardless of the theory or theories applicable to any given case, the immediate mechanical cause of the distressing paroxysm is a sudden spasmodic stenosis of the bronchioles.

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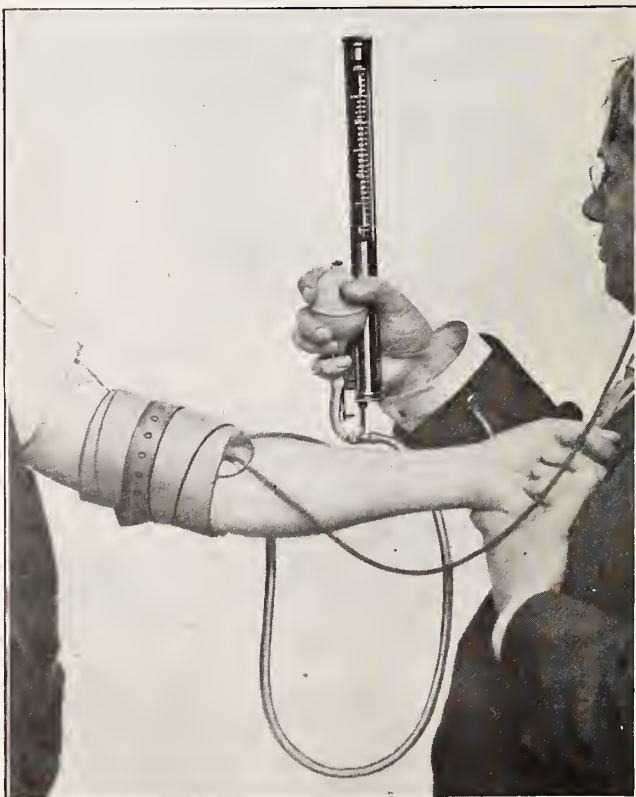
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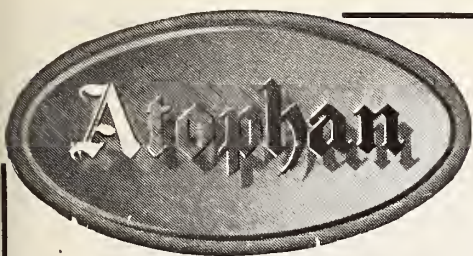
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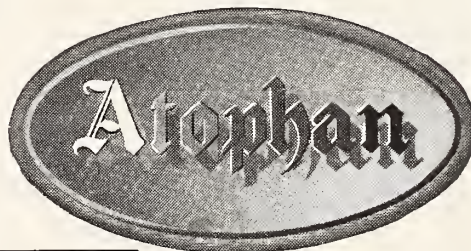
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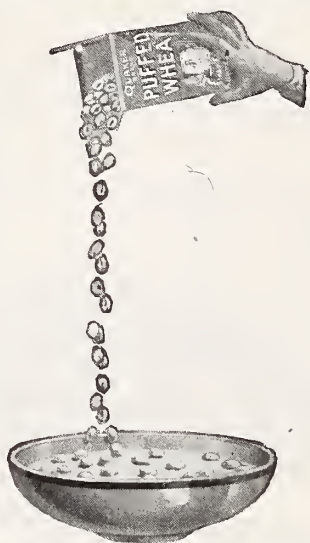
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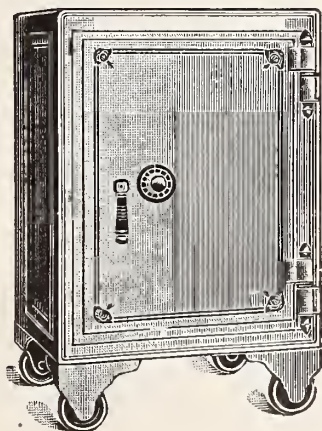
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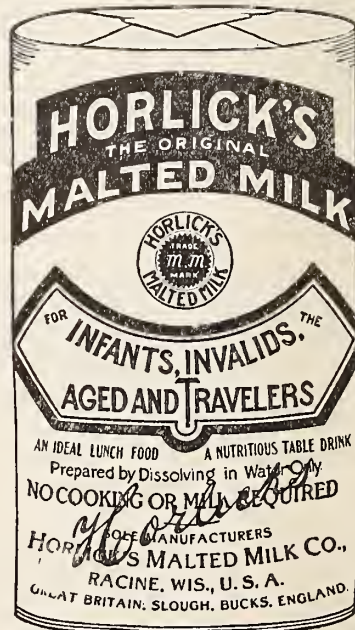
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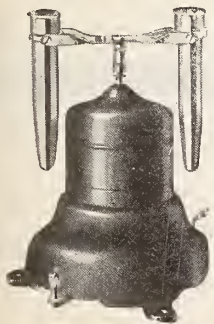
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REPORT OF A CASE OF ENCEPHALITIS LETHARGICA IN A PREGNANT WOMAN WITH AUTOPSY FINDINGS.*

MERIT D. HAAG, M.D.,
ANN ARBOR, MICH.

The case is that of a young girl, Miss M. H., aged 20, who was admitted to the Maternity Cottage, University of Michigan Hospital on January 17, 1919. At the time of entrance she was about six months advanced in a normal pregnancy and expected to be confined about April 19, 1919.

The family and personal histories were negative. She gave no history of having had an attack of influenza. This was her first pregnancy and up to the time of entrance it had been perfectly normal.

Physical Examination revealed a well nourished young woman apparently in good health. Her teeth were in poor condition. There was also a slight enlargement of the thyroid gland. The fetus was lying in an occiput left anterior position. Pelvimetry showed the pelvis to be of the simple flat type. Her blood pressure on entrance was 105 systolic and 50 diastolic. The urine examination was negative. The Wassermann test on the blood was negative. She remained at the cottage for about three weeks in apparently good health.

February 8, 1919 she came to the ward complaining of a pain over her left eye, which radiated back over the left side of the head. She also complained of pain in her left arm and back. On being questioned she said she had been nauseated for several days and had been vomiting. A specimen of urine tested at this time was negative.

February 9, 1919 she returned to the ward. She appeared to be very anxious and worried. She complained of diplopia, pain over her left eye and in her left elbow. She felt dizzy at times. Examination revealed a ptosis of the left eyelid and a convergent strabismus. There were irregular twitchings of the mouth, left arm and right leg. There was a slight tremor of the tongue. The temperature at this time was 100.4 degrees. She was put to bed immediately. She was very rest-

less, anxious and talkative and complained of feeling electric shocks passing through her body. She refused to stay in bed and could be kept there only by careful watching. The temperature rose to 102 degrees. The pulse was 100 and the respiration 30 per minute.

The following day showed no change in her condition. She was still complaining of pain in the left elbow, was irrational and very much frightened. She feared some personal harm. She was very restless and could be kept in bed only by careful watching. In spite of this she got out of bed during the night. She was examined by Doctor Jones of the Psychopathic clinic who said the patient was in a state of mild delirium, probably toxic in origin. The white blood count was 17,200.

Examination on entrance to this department showed no marked change except that she was a little more excitable, the tremor was slightly marked and the temperature was 104, pulse 120, respirations 40. The eyes were negative except for some rotatory nystagmus. The tongue could be extended for only a short distance. It protruded in the midline and there was a marked tremor of both tongue and lips. The extremities showed marked tremor, equal on both sides but no spasticity. Reflexes: The Kernig was negative. The knee, Achilles and biceps jerks were increased. The cerebrospinal fluid was clear and the pressure was not increased. The cell count was 50 per cubic millimeter and the albumin was increased in amount. The Wassermann reaction was negative.

February 12, 1919 the eyegrounds were examined and reported as negative. An x-ray examination made on the same day, in an attempt to rule out a pneumonia, was unsatisfactory on account of the poor co-operation of the patient. The report raised the question of pulmonary congestion and beginning pneumonia. The white blood count was 12,000. The patient was examined by Doctor Klingmann of the Neurological Department. His examination was as follows: "The patient is lying on her right side, legs drawn up. The left side of the face and the muscles of her left hand and arm are twitching. The eyes are closed. The left side of the face is somewhat relaxed, which is evident in the lower portion of the left angle of the mouth. She obeys commands on urgent repetition. Her movements are slow. She is semicomatose. Her pupils are unequal, well dilated and react sluggishly to light, more promptly in accommodation. The outward excursion of the left eye is incomplete, slightly beyond the midline. It is normal on the right side.

*From the Department of Obstetrics and Gynecology, University of Michigan, Ann Arbor, Michigan.

In showing the teeth there is a decided sagging on the left side of the face. There is a Chvostek's sign on the right side and Trousseau's sign is present on both sides. There is no rigidity of the neck and no Kernig. There is no tremor or paralysis of the lower extremities. Tendon reflexes are all prompt and about equal on both sides. The plantar reflex is normal on both sides. We find external rectus palsy on the left side, insufficiency of the facial on the left side, unequal and sluggish pupils. Suggest meningitis, possibly tuberculous meningitis.

An analysis of the cerebrospinal fluid obtained on February 13, 1919 showed a trace of globulin, a positive test for albumin and a cell count of 85 per cubic millimeter. A fibrin web formed in twenty hours. No tubercle bacilli were found and the Wassermann reaction was negative.

February 14, 1919 the patient's condition was much worse and the temperature was 101. She was becoming more drowsy and stuporous, and her condition more spastic. The pupils were irregular and did not react to light. She could not answer questions and was not eating well. The cerebrospinal fluid showed a positive globulin test and there were 52 cells per cubic millimeter. A blood urea showed .052 grams of urea per 100 cubic centimeters of blood. The patient was examined by Doctor Peterson and the fetus found to be still alive.

February 15, 1919 her condition remained about the same and the temperature was 100-102.5. The respirations were becoming more labored and the heart was irregular at times. She lay in a semi-stuporous condition, but would still answer questions. She was not irritable and still complained of diplopia. Examination showed the right pupil to be larger than the left. There was a ptosis of the left eyelid, but it was not as marked as at the previous examinations. The lungs showed a few moist rales at the right base. The Kernig was positive on both sides and the Babinski was positive on the right side. The fetal heart could still be heard.

February 17, 1919 the patient had become much more stuporous and could be made to understand only with difficulty. She could not answer questions and the breathing was becoming very irregular. She had some dyspnea and the lungs were filling up. There was moderate consolidation of both bases with bubbling rales. The fetal heart could still be heard. The Kernig was positive on both sides and the Babinski negative. Her condition gradually became worse and the temperature reached 107 just before death, which occurred at 8:45 p. m. An autopsy was performed with a clinical diagnosis of tuberculous meningitis.

Autopsy. This was performed at 8:15 a. m. February 18, 1919 about twelve hours after death by Doctor Carl V. Weller who made a gross pathologic diagnosis of acute toxemia of pregnancy; pregnancy seven and one-half months; acute degenerative parenchymatous hepatitis; acute myocardial degeneration; extreme pulmonary congestion and edema; persistent thymus; lymphoid hyperplasia of the spleen; early parenchymatous degeneration of the kidneys; extreme acute passive congestion of all organs.

On removing the brain the dura was adherent. The meningeal vessels showed intense congestion, especially on the left side. The inner meninges on the right side were thickened. The cerebral hemispheres, cerebellum, pons, choroid vessels and basal vessels all showed marked congestion.

Microscopic Pathology:

Heart—Fatty infiltration, atrophy and fatty degeneration.

Lungs—Congestion, edema, acute emphysema.

Spleen—Acute and chronic passive congestion.

Kidneys—Slight cloudy swelling, congestion.

Liver—Dissociation of liver cells; diffuse fatty degeneration of slight degree. Fat stains show minute fat droplets throughout the liver cells.

Meninges—Cortical meninges show congestion and edema; a slight increase of cells in certain areas but no definite meningitis in the brain.

Brain—Throughout the brain there are numerous perivascular infiltrations made up of lymphocytes and polynuclears. About some of the blood vessels there are extravasations and about others phagocytes containing blood pigment. The brain condition is that of an encephalitis, in many ways resembling the picture of lethargic encephalitis.

Pituitary—Anterior lobe shows marked inflammatory infiltrations. The basophilic cells are swollen and hypertrophic. Marked congestion.

Cord—Meninges show congested vessels and definite infiltrations of lymphocytes and polynuclears. In the cord itself there are also perivascular infiltrations as in the brain but less marked in degree.

Final Pathological Diagnosis:

Acute encephalitis; acute hypophysitis; myelitis; parenchymatous degeneration of kidneys, heart muscle, intima of aorta and liver; congestion and edema of lungs; lipoidosis of adrenals; pregnancy 7½ months; toxemia; acute catarrhal gastritis.

According to Flexner the first cases of this disease reported in this country occurred in the winter of 1918-1919. As far as can be determined this is probably the first time this disease has ever existed in this country although at present it is rather widely distributed.

The present cases probably resulted from an outbreak of the disease which occurred in Vienna and neighboring parts of Austria in the winter of 1916. Cases were reported in England and France early in 1918 and in this country early the following year, 1919. The early cases in England were thought to be due to food poisoned with the bacillus botulinus, as were the first two cases reported by Margaret Schulze in her article.

Bassoe states that the only other epidemic of a similar disease occurred in connection with the pandemic of influenza in 1889-1890. A disease very similar to encephalitis lethargica and presenting the same symptoms was called nona.

It spread throughout Italy, Hungary, Germany, France and England.

The case forming the basis of this article occurred early in the year 1919 and at this time very few cases of the disease had been reported in this country. It was among the first cases to appear, in this country, complicating pregnancy. On this account it presented numerous difficulties from the standpoint of diagnosis. Many, if not all of the examiners, not having heard of similar cases tried to explain the symptoms on the basis of some disease with which they were familiar. Naturally a diagnosis was not made before autopsy. In fact the disease was not mentioned as a possibility.

When the patient first began to complain of nausea and vomiting, a possible toxemia of pregnancy was considered, but the absence of urinary findings, jaundice, and a normal blood pressure caused us to look elsewhere for an explanation of the condition. The psychiatrist in answer to a refer suggested a possible toxic delirium. When, however, she developed fever, with diplopia, ptosis, facial paralysis and numerous other symptoms referable to the central nervous system, a possibility of tuberculous meningitis was considered. In fact the only diagnosis suggested to us by the neurologist was a possible tuberculous meningitis. Now that the disease is becoming relatively common, a mistake in diagnosis in a case presenting such a typical picture should not be made.

It is to call attention to this disease as a complication of pregnancy, that this case is being reported so that future mistakes may be avoided. Throughout the entire course of the disease, the patient at no time showed any signs which would indicate that she was attempting to abort, in spite of the fact that the temperature was running as high as 104 degrees. The fetus remained alive until the day the patient died. The advisability of a postmortem Cesarean section was considered, but Doctor Peterson advised against it on the ground that there was practically no chance for a child under seven months delivered by this operation.

The occurrence of encephalitis lethargica as a complication of pregnancy is evidently infrequent. A review of the literature shows only ten other reported cases complicating pregnancy, although without doubt many other unreported cases have occurred.

Margaret Schulze in an article entitled "Encephalitis Lethargica in Pregnancy," has abstracted seven cases and reported one case of encephalitis lethargica occurring during pregnancy. In addition the following cases of the same condition occurring in the pregnant wo-

man are abstracted for the sake of completeness.

Case 9. This case was mentioned by Doctors P. F. Morse and E. S. Crump in an article which appeared in the *Journal of Laboratory and Clinical Medicine*. The case history was not given. The patient died and at autopsy an early pregnancy was found. The autopsy findings in this case were not given.

Case 10. This case was reported by Garnett. It occurred in a woman, aged 26, who had had one previous normal pregnancy. Her trouble started when she was eight months pregnant. At this time she became nervous, complained of tingling in the arms and legs and extreme weakness. The temperature was 102.5. Later she became semidelirious and restless. There was diplopia, ptosis of the lids, nystagmus and marked mental and physical exhaustion. Her answers to questions became vague and wandering. She would lapse into sleep after any slight exertion, either mental or physical. The pupillary reflexes were sluggish, the tendon reflexes hyperactive and the superficial abdominal reflexes absent. The blood pressure was 110 systolic, 70 diastolic. The urine was negative and the white blood count normal. The Wassermann on the blood was negative. Spinal puncture revealed a clear fluid under slightly increased pressure; the protein content was increased, there were 18 cells per cubic millimeter and the Wassermann test was negative. The temperature varied from 101 to 102.5, her pulse from 100 to 120. Her condition gradually improved but was far from normal when she went into labor. She did not complain of her labor pains. She had retention following delivery and on catheterization 72 ounces of urine were obtained. During the puerperium she seemed to have a partial paralysis of the bladder. She continued to improve and was recovering slowly at the time the case was reported.

A review of the eleven reported cases shows that out of this number seven of the cases, or 63 per cent. proved fatal. There were two cases, or 18 per cent, which recovered while the outcome in two others was not stated. The mortality has varied in different reports in non-pregnant patients from 20 to 40 per cent. (Flexner). The mortality of 63 per cent. occurring in this series of cases is, therefore extremely high.

Five of the eleven cases, or 45 per cent., were delivered, three, or 27 per cent., were not delivered and the outcome as to delivery in three others was not stated.

The question arises does the pregnancy give the disease a graver prognosis? Both of the cases which recovered were delivered at term but it would be difficult to say whether the emptying of the uterus altered the outcome or not. Two other patients delivered themselves but in spite of this fact death followed. The final outcome in one case which was delivered is not stated.

The emptying of the uterus was considered in Sach's cases but was advised against, as it was thought that nothing would be gained by it. Whether or not anything could be gained by this procedure is questionable. The liability to abort is evidently much reduced in this disease because in spite of the fact that some of these cases ran high temperatures they did not expel the fetuses prematurely. In not a single case did abortion result.

The labors in cases VI, VIII and X were interesting from the standpoint of being painless. All three labors were short and rapid and the patients did not complain. There was apparently very little shock to the deliveries. This insusceptibility to pain was also shown by the patients when spinal punctures were done. They were performed in most cases without any local anesthesia and there was very little discomfort to the patients. Case X had a very marked atony or partial paralysis of the bladder following delivery, 72 ounces of urine being obtained on catheterization. She was unable to void until her bladder held at least 40 ounces of urine. This symptom of retention is not uncommon in encephalitis lethargica cases.

The question as to whether postmortem Cesarean section should be done in those cases where the child is viable and still alive when the mother dies is one which should be considered. Undoubtedly by so doing at least an occasional baby could be saved. This question is one which could be easily settled if considered only from the scientific standpoint, but whether it would be practical in private cases is questionable. At least it might be considered in selecting cases in hospital practice.

The disease does not seem to have a serious effect upon the fetus. The babies in all cases were normal except one in which the fetus was stillborn. In the case reported the fetus was still alive on the day the mother died.

The symptomatology of these cases and the pathology of those which went to autopsy does not differ materially from that of cases occurring in non-pregnant individuals. The disease usually comes on gradually, the most common symptoms being lethargy, sometimes preceded by mild delirium, irritability and restlessness, diplopia, ptosis of the eyelids, facial palsies, fever and in some cases nausea and vomiting. Most of the cases show a leucocytosis of from 12,000 to 17,000. The urine is usually negative and the blood pressure remains normal or slightly below normal. The neurological findings are extremely variable, differ-

ing in each case, and in the same case from day to day.

Examination of the spinal fluid showed a fluid under slightly increased pressure. It was clear and contained from 11 to 85 cells per cubic millimeter. The albumin and globulin are increased and the Wasserman reaction negative.

The pathology consists chiefly in congestion and edema of the brain which is most marked at its base. The meninges show congestion and edema with a slight increase of cells in certain areas. It is patchy in character. The region of the basal ganglions and pons are most frequently affected. The medulla and upper cervical cord may be affected. In some cases minute hemorrhages appear. There are perivascular infiltrations consisting mainly of small lymphocytes. A few polynuclear cells are also encountered. There is practically no degeneration of nerve cells.

In conclusion it may be said that encephalitis lethargica occurring during pregnancy is a serious complication, the mortality being 63 per cent. in the reported cases, patients running high temperatures having the worst prognosis. The disease does not tend to cause the death of the fetus and it does not seem to predispose to abortion. Most patients with the disease, if they live long enough, carry their babies to term and the labors are quite likely to be painless or practically so, there being apparently very little shock connected with them. Whether or not the pregnancy complicating the encephalitis has anything to do with the high mortality will have to be determined after more cases have been reported.

The advisability of performing postmortem Cesarean section where the child is viable should receive careful consideration. Viability as regards the performance of postmortem Cesarean section must be looked at differently from viability as regards other methods of delivery. Public opinion will sanction delivery by the natural passages in an effort to save the life of the child. On the other hand, public opinion has not been educated to the point where the Cesarean operation can be performed upon the dead body of the mother, unless there be every chance for the survival of the child. Failure to save the child after such an operation due to its questionable viability will bring this rare and occasionally extremely useful operation into disrepute and possibly prevent its use where a valuable life might have been saved.

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TOO LATE AND TOO EARLY IN ABDOMINAL SURGERY.*

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One of the pregnant aphorisms of the illustrious Father of Medicine, issued centuries ago was, "Life is short, art is long, experience fallacious, judgment difficult."

In view of the fact that much indifferent work is being done in surgery, and with the idea to stimulate thought and action to higher purpose and to greater endeavor I have chosen the above phrase as the basis of a few remarks based on my experience of the past twenty-five years, limiting my remarks to work in the abdominal and pelvic cavities.

Haste in advising operative work often means that measures are taken without due consideration for the welfare of the patient, and does not imply always only a brief interval of time, while delay may be for the good of the patient or for evil results according to circumstances. It is fortunate that in the majority of instances of surgical disease, the decision by the *competent* surgeon or operator can be made without a special sense of responsibility in spite of the fact that experience and judgment are often fallacious.

There are in every community usually two cases of operators who may be represented by those on the one hand who are ready to operate if there be only an excuse for an operation, while on the other hand, perhaps the most numerous representatives are to be found in the ranks of the general, or purely medical practitioners, who by prejudice or fear defer as long as possible the advice that surgical measures be taken. The fact must not be lost sight of that

this is often a difficult task, because it will be at once apparent that judgment and experience are very closely associated and interdependent the one upon the other, and that in the consideration of each one separately, and in their several relations one with the other, there are many different factors to be borne in mind, the relative measure of importance of which it will be found impossible accurately to determine.

The broadening of the field of surgical work and especially that of abdominal and pelvic conditions, during the last generation has been such that it would be impossible to avoid the development of these two classes mentioned, both from the merits of the subject itself, and occasionally we may fear from motives of personal interest that consciously or unconsciously sways judgment.

These remarks do not apply to the trained surgeon.

The fundamental principles that underlie the question and consideration of operation or non-operation may well be expressed by the terms radical and conservative, meaning thereby that one class of individuals or surgeons are apt more or less blindly to do certain things under given conditions, while the other is more likely not to do so. Quoting what a well known surgeon said, "Nine out of ten men will know what to do under given conditions, but the tenth man will know what NOT to do, and he is the most valuable man of the ten." The truth of this saying, I am sure has been demonstrated upon more than one occasion to every one in this assembly.

One of the fundamental principles that underlies the consideration of the question of operative or non-operative interference are, first, can we *remove* the diseased organ or favorably modify the morbid process by surgical measures, and, second, will our operative interference be liable to create other morbid processes more dangerous and troublesome than the condition present before operation. These are serious questions and are not to be answered in an off-hand or trivial manner. I will start with the premise that the great danger and one very grave, is that we should seek to avoid in abdominal and pelvic work in the induction or extension of peritonitis. Such dangers as shock, hemorrhage, intestinal paresis and infection I shall not dwell upon, for they are not pertinent for or against operation in the vast majority of cases, being usually operative or post-operative events that cannot be foreseen in the majority of cases. It cannot be too strongly stated that operative interference in abdominal or pelvic conditions in the presence of an acute spreading

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inflammatory process is especially hazardous, and general experience shows in such cases a large operative mortality, as for instance, acute salpingitis etc. This is more especially true in those cases in which the operative measures would be liable to diffuse the septic material to hitherto uninvolved areas, hence much care and discrimination in all cases of appendicular, tubal, gall bladder and duct involvements. The extension of the morbid process from the interior of the appendix or tube to the peritoneum implies on the one hand the death of the patient, and on the other protection from death. In the one case the protecting effects of local adhesive peritonitis, and on the other a rapidly extending inflammation of the peritoneum with all the many fatal complications and sequences of septic peritonitis.

In many cases, in estimating the factors that will influence for or against speedy operation is the probable presence or absence of this protective peritonitis, and our decision will be based on evidence which shows that our entrance into the affected area will not spread the infection and further involve the peritoneum. Hasty, and I believe truly unwise, is the surgeon who will attack by abdominal incision, a case of appendicitis or salpingitis in which the evidence favors the presence of protective adhesions which will wall off the area of disease and allow the virulence of the acute attack to abate so that the character of operative measures may change and the dangers be lessened. By this caution I do not wish to be understood as objecting or calling hasty the removal of an acutely inflamed appendix. In fact I would call the lack of operation in such cases one of dangerous delay. An operative mortality of 15 or 20 per cent. in acute pelvic or abdominal inflammation is far beyond the probable danger of the diseases themselves uninfluenced by operative measures.

True, we sometimes come face to face with individual cases of such inflammations in which we have the uncomfortable reflection that if we do not interfere, that special case may end fatally, while interference might bring about recovery; such as we sometimes see in neglected cases of ruptured appendix or tubes, followed by general peritonitis. It is our duty, however, to decide on the basis of the probable danger in each case, and if we are to make abdominal section in the acute stage of ALL cases of tubal or appendicular disease, I am sure statistics show that the deaths would be more numerous than when a waiting course is pursued in cases where the process has extended beyond the organ involved. I repeat that when we know,

however, that if we can remove the offending appendix for instance before the inflammatory action has extended to the peritoneum in the vicinity, and before such protective adhesions have formed as to render a search for the organ a probable means of distribution of the septic material, then we can unquestionably diminish the mortality by early operation, though the term "Early operation" is only relative and not entirely to be measured by hours or days. The splendid results of early operation, and the evil results often following delay have convinced us from an experience of the operative treatment of appendicitis from early date to the present time, that the earliest possible removal of the appendix in every case where it has not gone beyond the appendix will result in the greatest number of recoveries. When we have had reason to believe that protective peritonitis is forming or already exists, it has been and remains our invariable rule to advise a waiting course for either the formation of a localized abscess or the subsidence of the inflammation. Taking the symptoms usually relied upon for diagnosis in intra abdominal or pelvic inflammation, namely, pain, vomiting, tenderness and muscular rigidity, we must not rely upon the relative importance of each factor alone, but as a whole. For occasionally there is moderate rigidity of the abdominal muscles when the other signs justified the diagnosis of intra-abdominal inflammation. Again, pulse and temperature may both be normal and yet grave intra-abdominal lesion exists, and relying on simply one corroborative symptom we may be led to believe that no grave condition exists and a fatal delay. Unless there is a corroborative evidence of the existence of protective adhesions we proceed to operate, because there is less risk in operative measures, than the danger of rupture into a free peritoneal cavity. Under such conditions we have found grave lesions without any notable attempt at the formation of adhesions, and with very limited changes in the contiguous peritoneum.

Now for cases in which delay is unwise.

The list would be too long to enumerate all those abdominal and pelvic cases that would be liable to be injured by delay, but there is one broad general principle that should guide us, that if there is evidence of tumor or other morbid condition, that is not attended by an acute inflammatory process, and there is no other strongly contra-indicating reason, we advise operation even if the diagnosis is not positive, for in many cases we cannot know all about the trouble without operation, and if this condition proves to be one not relievable by operation, our

incision for examination will imply only a little additional risk. While it is our imperative duty to learn all about our patients before operating, we are more and more impressed by experience that many surprises come to us in the course of operative work. How many of us are following the course of delay in cases of pelvic tumor, attacks of cholecystitis, appendicitis and other severe conditions, hoping that the attack may subside and that an operation may be avoided. Unless there be good reason for procrastination, the chances are that danger is being incurred. How frequently has this been forced home to us in old cases of cholelithiasis, appendicitis and salpingitis where adhesions render an otherwise simple and slightly hazardous operation, one of great difficulty and high mortality.

Do not delay in sudden, acute, severe abdominal pain with symptoms of peritoneal shock for a positive diagnosis; do not waste precious moments which alone make recovery possible, in waiting for symptoms confirming a probable diagnosis. Do not wait for a diagnosis in cases of abdominal hemorrhage from whatever cause, perforations of any of the hollow organs, acute infections of the gall bladder, rupture of the liver or spleen. Finally, in cases in which the lesion is only suspected, time is not to be lost if that suspected lesion is one essentially fatal if not promptly relieved. Do not allow yourselves to be deterred because someone can cite a case which has recovered after the full development of serious abdominal conditions. The late celebrated Maurice Richardson said: "I could count a hundred abdominal operations performed too late for one unnecessary operation." Sudden, acute, severe abdominal pain, with symptoms of peritoneal shock, have taught me not to wait until a positive diagnosis can be made, but to proceed to immediate operative procedures.

Personally, I never start an abdominal section without the feeling that it would be a relief if I could with due consideration of the interests of the patient, lay down my scalpel and leave to nature the future charge of the case, but experience tells us that to operate is often the only way to cure not otherwise obtainable.

The painful problems are, when and how. The how usually will be settled by each individual operator, but the when is a question with which physician and surgeon must struggle, and happy those who are charged with such problems when they can look back and feel that they have avoided rash haste and unwise delay.

Well has the Preacher said:

"To all things there pertain time and judgment.

The wise man discerneth both time and judgment."

CIVIC ACTIVITIES IN PUBLIC HEALTH AND PUBLIC HEALTH IN CIVIC ACTIVITIES.*

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When first asked to discuss this subject we hesitated to accept the responsibility, because we realized the great field which it embraced and we also realized our own inability to bring before you in the proper way the many varied relationships which exist between civic organizations and the problems of public health. We finally agreed to accept the task, not because we are less doubtful of our ability to handle it properly, or because the subject seems less important, but because we thought that it might help to create some discussion, from which we, ourselves, would be able to derive a great deal of valuable information.

The title as first suggested was "Civic Activities in Public Health," but we have taken the liberty of adding to that also the question of "Public Health in Civic Activities," for the reason that the two seem to us to be so inseparably connected, that it is impossible to consider the one phase of the subject, without touching upon the other as well.

This is a most important and vital question and if it could be solved satisfactorily, it would help in a large measure to solve many of the difficult problems which confront hygienists and sanitarians in the performance of their duties.

In order to discuss this subject intelligently, we must first get a clear understanding of what we mean (1) by Civic Activities and (2) by Public Health. Depending upon our interpretation of these two topics, will depend the value of the application of the inter-relationship which exists between them.

Regarding the question of civic activities, we have looked in vain, through the various encyclopedias and other works of reference, for a definition, or even an interpretation or description, of what these might embrace. We are, therefore, compelled to use our own interpretation of them, in the light as they appear to us, to be commonly applied in the average community, and what their application should, in our opinion, represent. Civic activities, must

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be held to include every phase of action which involves or reacts upon the individual, person or group, outside of a purely personal or probably family relationship. So we must consider it as applying to all civil and social functions reaching a wider field than the purely individual or family circle. This gives it a very wide scope and an almost unlimited field of activity, and, it is from this wide range viewpoint that we desire to discuss it in its relationship to public health.

When we come to consider the question of public health, we find many and varied explanations given by different individuals. We would not, however, consider it from the narrow aspect which it at one time was looked upon. No longer do we consider the realm of the health officer or health department to consist merely in the quarantine or isolation of the communicable diseases. Public health is rather concerned with all phases of activity, which have any relationship with the health of the individual or of the community, or which may have an influence in any way in determining the life tenure of the normal individual.

One of the most graphic and comprehensive definitions which we have seen of this subject, was the one given by Professor Winslow, of Yale University. He thus expresses the modern up-to-date scope of the field of public health.

"Public health is the science and art of preventing disease, prolonging life and promoting physical health and efficiency, through organized community efforts for the sanitation of environment, the control of community infections, the education of the individual in principles of personal hygiene, the organization of medical and nursing service for the early diagnosis and preventive treatment of disease, and the development of the social machinery which will insure to every individual in the community a standard of living adequate for the maintenance of health."

This represents no small program for the executives of public health, and it is from this standpoint that we desire to consider it in its connection with our subject under discussion.

With this then as the basis for our understanding of what public health really means and includes, and with the wide range view of the scope of civic activities, we can now more readily realize how these two activities correlate with each other.

We might ask why should civic activities have anything to do with public health? In reply we would say, that to our mind, there is nothing which should be of equal importance to all civic organizations, as the question of public health. Everything else is subservient to, and dependent upon this, and the public health,

depends upon the grouping or aggregate of the combined health of the individuals comprising the community.

Civic organizations are concerned with civic problems and civic programs, and what civic problem is not vitally affected by the community and individual health? No matter whether it be the industrial, the commercial, the educational, the social or the religious field of civic activity, all are inseparably connected with the question of public health in some way or other. This being the case, we can readily see what a powerful force civic action can become if it is utilized in the right direction, after being aroused to activity.

One of the greatest factors which has been effective in arousing civic interest in public health matters, was the late war. The fact that one out of every three men examined for service in the draft age, was found to be unfitted for military duty, due to some defect or disease, and we believe, from our own experience in the examinations conducted at some of the training camps, that if the rigid requirements of the pre-war days had been maintained in these examinations the percentage of unfit would have been even much greater. This experience however, made us all realize that we had been negligent somewhere in our health policy and program, local, state and national, else this condition would not have been allowed to develop. We had been misdirecting our energies along other lines. We had been too actively engaged in commercialism and were blind to the fact that our eager pursuit after commercial gain, to the exclusion of matters of health, was really interfering with our great commercial ambitions.

The chief value we have derived from this object lesson, has been in that it has aroused civic interest in the subject of health. Now we find industrial and commercial interests inquiring, to what extent does this condition affect them? Does it affect their producing capacity, and if so, how? It has altered the health proposition from being one looked on as a merely sanitarian, philanthropic or humanitarian project, to one of economic efficiency. When we fail to get response to our pleas for bettering health conditions, from the standpoint of the benefit to the individual, we can get an immediate outburst of interest, if we can show that it affects the producing capacity of commerce and industry.

Vast sums of money have been expended in the interest of preserving the health and lives of our horticultural and live stock. Why? Because every crop of fruit destroyed by the dis-

ease of the fruit trees, and every hog or steer that has died from hog cholera or foot and mouth disease, has meant a lessening of the food supply of the nation and a consequent increase in its cost, as well as, an actual money loss to the producer. But what an effort had to be made in order to get even a small appropriation from our legislatures, either municipal, state or national, to fight disease and death among our human population? They could not see the financial return from money so invested. The result has been that the hygienist and the sanitarian got but little response to their appeals for aid. However, the awakening has come, and the public are being brought to a realization of the true state of affairs, and, there is no more potent power in the nation, than that of aroused public interest. They now see that every individual who through unhealth is unable to do his or her full duty, is lessening production, and not only this, but is to a certain extent, even becoming a burden on the producing capacity of others. That every child allowed to die or become incapacitated in infancy or early childhood, cuts off just so much from the future producing capacity of the community, state and nation. In a word, they now see, or at least they are coming to see, that every unhealthy individual is a drain upon the producing equipment of the nation, and that every person who dies before the expiration of their allotted span of three score and ten years, is an actual loss to the available assets of the nation.

The question of health, whether personal, or public, has ceased to be looked upon merely as the dream of idealists, but has become a national civic and economic problem. This has been brought about very largely, through the interest that has been aroused among our civic organizations, and it must be largely through these same sources, that further advances in this line must be achieved. The elimination of the mosquito from the Panama Canal zone, made possible the canal which now unites the great oceans on the east and west of our continent. This one public health achievement has meant more to the commercial and industrial activities of the world than any other great achievement of modern times.

Health departments must keep in close touch with all civic organizations and keep ever before them the health needs of the communities which they serve. Civic interest has been aroused and it is now up to the public health departments to see that this interest is maintained and that its activities are directed in the proper channels.

In considering the various activities and their connection with public health, we are not go-

ing to touch on some of these civic activities, because their relation to health problems is so apparent, that with the limited time at our disposal, we do not consider it necessary to devote any of it to a discussion of them. Take such organizations as the American Red Cross and its many activities. This is so obviously involved with the problems of public health, that every one at once realizes its importance in this direction. The same is true of the various anti-tuberculosis societies which are organized throughout the land, these are organizations primarily concerned with public health matters. The various social welfare organizations, which largely concern themselves with the problem of venereal diseases, their prevention and elimination. We also have the civic industrial welfare organizations, whose chief function relates to the health problems of the industrial employees, whether it be in the mine, the factory or the workshop, or even in the homes. The Y. M. C. A., the Y. W. C. A. and the Boy and Girl Scouts and the numerous other civic organizations of a like nature, all these have positive health programs in connection with their various other activities, and all are very actively engaged in health work among the various individuals who constitute their membership.

We would, however, rather limit our remarks to the consideration of a few of the civic organizations, probably not so commonly recognized, as being actively concerned with public health affairs, but even in considering these we will only have the time to devote to a very few of them.

Let us consider very briefly a few of the organizations whose civic activities we meet with in the ordinary community. Is our civic organization one which is concerned primarily with the material welfare of the community? Examples of such are the commercial clubs, the chambers of commerce and other organizations of a like nature. In what way are they interested in the question of public health, if at all? Have we ever examined the advertising propaganda which is put out by these organizations calling attention to the merits of their particular community? If so, we will have observed that some of the important things which they emphasize, are, a good water supply, a good sewerage system, a good housing system, a low sick and death rate, etc. These are all things which belong to the realm of public health and are of vital interest to every community. If any community desires to have its maximum of material success, it can only have it, if it sees to it, that it allows nothing to exist which will have a deleterious effect upon the

health and lives of the men, women and children of their community, because these are the basic factors concerned in the production of the materials from which their material wealth is derived. So that all civic organizations which are commercial in their nature, are not only interested in, but are also affected by, public health. It is a fact, that all such organizations which are really accomplishing things in their communities, realize that the first essential in their success, is a community where health prevails, and this condition can only be accomplished and maintained through their active interest in, and co-operation with, the public health activities of their community.

Take such national civic organizations as the Rotary Club and the Lions' Club or the Kiwanis Club. These are all practically founded upon the same plan and principles. One of the chief objects of their organization is to further interest in the promotion of public and private health work in their community.

These organizations realize that every consideration is subservient to and dependent upon, the health of the community, and the community health upon that of the individual.

Health is recognized as wealth, because without health, or even with impaired health, the wealth producing function of the individual or the community is lost, or at least very much diminished. Lack of health among industrial employees is now recognized as one of the greatest factors in inefficient production which manufacturers have to contend with. This impairment of health is brought about through so many channels, that the field of public health as it touches our commercial organizations, is almost boundless. Among these are, working conditions and environment, including that of the workshop, the home and the community, food, facilities for recreation etc., these all play an important role in the production of health or unhealth, depending on whether they are proper or improper. Hence all commercial organizations, through their civic activities must take an active part in the public health program of their communities.

Next let us consider our civic educational activities. What interest is there in the civic educational program of a community, in connection with the public health. Can the educational activities be conducted without an active part in the public health movement in their community? We answer, most emphatically, they can not. Modern educational activity has been shown to be absolutely dependent upon the health of the children. All conditions which interfere with or affect the health of the

pupils injuriously, will also interfere with their educational progress. Educators for many years have known that they had to deal with what has been called, "backward" children, but now they have come to realize that most of this "backwardness" is due to diseased conditions, or physical defects, which exist in the child. So now our educational organizations are insisting on having these diseases or defects looked for and corrected, as early as possible, in order that the child may derive the full benefit from the educational facilities offered to it. Hence we have school nurses and medical inspection of school children. These are not being used from the purely philanthropic or humanitarian standpoint, but from the economic or financial standpoint as well.

It costs over \$50 per year to educate each child in our public schools, so that each "backward" child which fails to pass its grade in the regular time and has to repeat the work a second year, is adding an additional \$50 to the educational cost of that community. To illustrate, take a school district with an enrollment of 1,000 children, suppose only ten per cent. of these, and that is quite a low average, fail to complete their grade and have to repeat their work for a second year, this would mean that 100 children would have to be taught the same work over again. This would put an additional cost of \$5,000 on that school district for one year. Do you suppose that the educational organization of that district, when it comes to realize the amount of this really needless expenditure, will not be interested in a way to stop it? Most assuredly they will, and it is largely due to this reason that we find in almost all up-to-date educational organizations, means provided for the examination and care of the children in the schools.

For many years it has been considered a rational part of the educational program in our public schools to include in the course of study, a course in hygiene, wherein the child is supposed to be taught some of the elemental principles concerned in maintaining its health. It has been recognized that the life of the individual is largely made up of our aggregate habits, and that if by instruction in early life proper health habits can be developed, then there will not be the same likelihood for the later development of habits which will be injurious, or at least unhealthy. So we have elementary training in the principles of hygiene as one of the forms in which educational activity is manifested in public health.

Again, is the civic organization interested in recreational activity? How and to what ex-

tent does the question of health affect their organization and activity? All recreational programs come in very close relation with modern health problems. First, recreation must be adapted to the age and physical condition of the individual. From the health standpoint, we know that persons of mature years, can take part in grades of physical exercise, which would be absolutely unfitted for those of less mature years. Also health supervision of recreational activity is required in order that the special form of exercise may not be carried to excess. We all know of persons who have been crippled physically through not knowing or having some one who does know, tell them, when to stop play. Many athletes and even others, have been injured permanently, and go through life with impaired heart function, because they have carried their physical activity to a point where fatigue of the cardiac musculature, has resulted in the production of an organic valvular lesion. Health supervision, if properly performed, would prevent such contingencies and would enable the individual to exercise in such a way and to such an extent, that only the greatest good and not injury would be the result of the physical training.

Again, in recreational training, it is found that in order to produce the best results and the greatest degree of efficiency, it is necessary to guard the diet of those in training and to prohibit the indulging in certain things which experience has proven to be injurious, or at least a handicap, in obtaining the best results. This education along the lines of proper diet, forms an important activity of the recreational organization.

We have not touched upon the most apparent of all reasons for the close relation existing between recreational activity and public health, and that is the good obtained from any form of recreation which aids in the building up and developing of stronger bodies and clearer minds, through the strengthening of the muscular tone and the elimination of the toxic products of metabolism. This is so apparent, that we do not consider it necessary to refer to it in detail. All these various facts show us, however, the very close relation which must exist between recreational activity and the problems of health.

We could extend the consideration of this subject to include every phase of civic activity, such as the numerous fraternal organizations, the activities of the various insurance organizations, which are doing a wonderful work in the educational field of public health; the various religious denominations and the multitude of other civic organizations which form a part

of every organized community, and we would find the same result. They are all vitally and inseparably concerned with the health problems of their community. All do not take the same degree of active interest in assisting in carrying out the program of health in their community, but this is largely because their aid has not been enlisted and their interest properly awakened, by the presentation of a worth-while program which they can help in carrying out.

In our own state the legislative department has seen the value of the use of civic activities in community problems, and they have by legislative enactment adopted the use of them, and have so correlated them that they may act collectively and harmoniously in the various communities.

The Community service law, known as the Baker bill, which was passed by the state legislature in 1919, and under which all the various civic organizations in any given community, may organize and form a body known as a Community Council, which is under the direct management of a body consisting of one representative from each civic organization desiring to be affiliated with the Council. One of the main objects of this Community Council, is for the express purpose of considering and taking part in the determination and execution of all such activities as may be beneficial to the health of the residents of the community which they serve.

This is an advance step in the work of harnessing the various civic activities in any community and linking them up with the health program of their constituent organizations. This organized effort can be made very valuable, if properly directed. It will prove a wonderful aid in not only creating a sentiment for, but also in executing, health work in their community. The active co-operation between the health department and the community council, will prove a valuable asset to the health of the community.

One of the ways in which these community councils can be of great assistance in the public movement, is by helping in the educational work of the health department. This is one of the biggest fields of the health department, notwithstanding the attitude of some who think, or at least talk differently, and who seem to think that the sole function of a health department is to prevent the spread of communicable disease, but even with this limited view, we fail to see how even that is going to be accomplished properly and effectively, without an educational program.

The attainment of the objects for which public health stands, as we have already outlined, can only be brought about by education. The enactment of health laws is not in itself sufficient, although most worthy. Men and women can not be made healthy by legislative enactment, any more than they can not be made moral, by the same method. This knowledge of the value of and necessity for, the observance of these laws must be brought home to the individual and the community if they are going to be of real benefit. One of the most useless things possible is, the enactment of a law, either health or otherwise, without the necessary knowledge for its observance and the suitable ways and means to insure its proper enforcement being provided. Better far to have no law on the subject, than to have it on the statute books and leave it unenforced. Such action leads to the disregard for all laws and forms the birthplace for bolshevism and other reactionary movements. Therefore, we say most emphatically, that education along health lines must occupy a foremost place in the health program, and in this work, the utilization of the civic organizations and activities in a community, can afford one of the very best means at our disposal for accomplishing this. An organization, or an individual, soon loses interest in any movement in which they come to feel that they have no part. Give these organizations a part worth while in these health programs, so that they will feel that they are vitally concerned in the subject and that they are really doing something which is of value, not only to themselves, but to their neighbors and the community as a whole, and many of our past and present difficulties in the execution of our health programs will be largely solved.

If we will only harness up our civic activities with the public health activity, we will develop a combination which will enable us to accomplish, almost undreamed-of possibilities. Let us give them a vision of the great need for, and the wonderful possibilities to be achieved through, this co-operative health movement and the obstacles which now seem great as mountains, will soon become nothing greater than molehills.

What nobler aim? What more inspiring ambition? Nay! What more Divine aspiration could fill the hearts and minds of the men and women of our land, who form our great civic organizations than that eager desire to join their forces with the various health organizations of the nation, which have as their object the tearing asunder of the dark veil of ignor-

ance and the breaking of the shackles of false ideas which have held so many individuals and communities in our land bound in captive darkness, making them a prey to the vultures of disease and death, leaving in their train wrecked lives and homes, misery, pain and death; and to lead them out through the plains of knowledge, up to the rosy heights of health, where they can see the glorious sunrise of the new hope of a lengthened life, enriched by the happiness and wealth which comes to them through the enlightening influences of the examples of right living, which will give them an inspiration to live their lives in strict accord with the laws of health, so that their lives may be also filled with the spirit of service and helpfulness to their fellow men, thus enabling them to take their place in the nation as useful and honored members of society and whose children will rise up to call them blessed, because they have passed on to succeeding generations the valuable heritage of healthy bodies and vigorous minds.

GALL BLADDER DISEASE.

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In any consideration of surgery, of the *gall bladder*, the fundamental principles will be, that a correct diagnosis be made. Without such, operation will be performed with anything but good results. The diagnosis must be determined by all possible means of examination of the gall bladder tract. We believe here, as in most diagnosis, that a good clinical history and a general careful routine examination is necessary. It is important in taking history that the one who takes the history have sufficient experience, that the essential points of a history be obtained. It is customary in some hospitals, that the history taking is placed in the hands of the junior internes. We believe that in order to take a good history, an interne with considerable experience is necessary, as many essential points are missed by the inexperienced.

It seems to be well established that infections, often focal in type, are the causation of many of the symptoms and infections which are present in the gall bladder tract. It is, therefore, very important that when patients present themselves with a suspicious history of gall tract disease, that a complete and thorough routine examination be made in all cases. To the usual examination, a careful examination of the accessory sinuses, examination of the tonsils, examination of the teeth which should be supplemented with X-ray, and unless the

symptoms are pronounced in character, and would seem to demand an immediate intervention, we would advise against surgery in these cases until all positive means of infection have been eliminated. Such routine examination of course, would require a careful proctoscopic examination when a possible local disturbance is found like thrombotic hemorrhoids or other possible avenue of infection that these conditions should be corrected, before having the patient subjected to any operation. We have for years recommended and seen startling results from having diseased tonsils removed in many cases of hyperthyroidism. It has been definitely shown regarding the role that infection plays in the diseases of the gall bladder, in ulcers of the stomach and duodenum. The diagnosis must be taken with such great care that when they are subjected to an operation, they will have the proper kind of an operation and may expect relief from their symptoms.

Many patients have been subjected to an operation for appendicitis when the appendix had played only a small or no part in the disease, and while in most cases the appendix is an important factor in the etiology of this disease, and as a rule when patients are not in serious condition and are subjected to an operation upon the gall bladder tract that the appendix be removed as a routine part of the operation. When operating upon the gall bladder tract unless the surgeon who operates on such cases is fully conversant with his symptoms after a complete history and correct diagnosis patients will often be made much worse by having unoffending organs removed and the disease is left behind, not discovered on account of the lack of training and surgical experience on the part of the surgeon and improper incisions. We believe we are not justified in the operations in the peritoneal cavity unless a routine examination is made of the abdominal contents. The sigmoid, uterus and adnexa, appendix and cecum, terminal ileum, both kidneys, stomach, duodenum liver, and gall bladder tract should be made part of every operation, unless there are counter indications against such. We advise Wassermann examinations, 24 hour urine blood examination, both chemical examination and complete count and time of blood clotting is made in every case in contemplating operations of the gall bladder tract except emergencies. In patients who are jaundiced, a blood transfusion should always be given before operation. We have not been convinced that excepting for occasional findings, the X-ray is of much value in arriving at a correct diagnosis of disease of the biliary tract. Whenever possible, however, we always

advise that an X-ray plate be made of the gall bladder region and that an X-ray examination be made of the stomach and duodenum. This we advise as part of the routine examination and have found that it gives valued assistance in elimination of disease outside the biliary tract. The X-ray diagnosis of gall stones depends upon the lime content, and one should not be influenced in the least whether or not the X-ray shows pathology, positive or negative, as to the presence of gall bladder disease.

It is a well known fact that many patients have been allowed to suffer with gall stones and gall bladder complications who have also had syphilis. It is equally true that many patients have been wrongfully subjected to operation on the gall bladder tract or stomach, that would not have had to undergo such if syphilis had been excluded. There will always be a few cases even after the most careful examination and where all the data has been carefully considered, that the diagnosis will not be revealed except on the operating table. But we believe that the percentage of these cases will be small if the examination has been carefully made. It is, of course, obvious that good results will not follow an operation on the gall bladder tract, unless the disease is found, and we advise against operations being performed on the gall-bladder tract when the patient has intestinal stasis or the symptoms of biliary stasis, which is only part or an end result of a general or medical diseased condition. It is this sort of patient who is usually neurotic and it is to this patient that we would suggest that surgery be not performed, as these kind of cases are usually worse after any operation.

Gall bladder disease is a disease of the fourth or fifth decade, but like cancer, occasionally is found in the very young. Cases, however, are not uncommon under the age of twenty but most of the cases come to the surgeon between the ages of 40 and 60 and in this series of cases the average ages are 46 years. As a rule the time from the beginning of symptoms until the time of symptoms averages 7 years. Most of the patients are very robust with fat abdominal walls, but in a number of cases with long standing infections who have been on the diet without relief present the clinical appearance and clinical appearance, loss of weight, etc., like duodenal ulcer.

JAUNDICE.

In this series of cases jaundice in some period in the history of the disease was present in 34 per cent. As a rule this is a symptom of complication rather than a disease and only in a few cases do we find jaundice excepting as the

patient has had several attacks of gall stone colic. It means either obstruction in the hepatic or common duct and whenever preceded by pain gall stones would be expected. We believe however, that it is very dangerous to allow patients to continue with gall bladder disease until this complication arises and we usually have accompanying this symptom pancreatitis to a lesser or a greater degree. If we would attempt to cure these patients, operations should be advised before marked changes have taken place in the pancreas, besides pancreatitis which is a very dangerous disease, we have cholangitis, acute hepatitis, local or general gangrene with gall bladder perforation and peritonitis. Most of these symptoms could be avoided if the patients had the right kind of treatment, which is not medical, but surgical. We believe that whenever gall stones are present that as soon as the diagnosis has been made that operation should be performed and the patients should not be subjected to a long course of medical treatment which is dangerous.

"The acute Indigestion" or "Gastric Neuralgia" for the most part should be eliminated. A carefully taken clinical history with a thorough routine examination will usually eliminate gastric or duodenal ulcer and when the diagnosis of such cannot be made by clinical history with X-ray aid, etc., we should suspect that the cases of epigastric pain might possibly be due to infected gall bladder or pancreatitis accompanying such.

The location of the pain of the gall bladder disease is usually under the right costal margin and unless the patient has a common duct stone or pancreatitis is usually not referred at first to the mid-epigastric region as are lesions of the stomach and duodenum.

CHOLECYSTECTOMY VS. CHOLECYSTOSTOMY.

As in most cases of operation the best results will be obtained by not following any certain method but to use the best method in the individual patient. In patients who are desperately ill, or who are not in very good condition, it would be very obvious that the operation which could be performed with the greatest safety to the patient should always be performed. Many patients are in such bad condition that they will need operations with local anesthesia, gas or oxygen and it seems best that cholecystostomy should be operation of choice in some of these cases. In cases of common duct stones, patients in bad conditions, it may be best to do an ectomy at the time of the operation, and do a second operation of ectomy later. We will get better results by opening the com-

mon duct, relieving obstruction draining this duct and removing the gall bladder if the patients condition is satisfactory. We should consider that a cholecystostomy is safest to a patient with an acute common duct obstruction, which is usually associated with an acute pancreatitis. By timely surgery and by cholecystectomy, patients will avoid such complication. The patients that are in good condition with either cystic or common duct obstruction, with atrophoid and functionless gall bladder will be better as a rule by removal of obstruction, draining the duct, and removal of the gall bladder, and by its removal, if we are convinced that we have relieved the duct obstruction, the patient will make a better permanent recovery, than if an ostomy is performed. In a certain number of cases transduodenal choledochotomy will have to be performed on account of the lodgement of the stone or stricture in the common duct. We believe that gall stones reform more often than generally believed and that most of these stones are formed in the gall bladder. Many troublesome adhesions will be avoided if the surgeon uses great care to protect the peritoneal surfaces and if he considers all fluid in the gall bladder septic. The adhesions which form after cholecystostomy are often very troublesome, even to the most skillful and as a rule a secondary operation for removal of the gall bladder is a much more difficult procedure than a primary operation of cholecystectomy. We advise cholectostectomy for the following conditions:

1. Empyema with cystic duct obstruction.
2. For mucous fistulas following cholecystostomy, first of all being sure that the cystic or common duct is not obstructed.
3. Gangrene of the gall bladder in some cases the patient is in such a serious condition that we have been content to remove the mucosa, this we perform by splitting the gall bladder to the cystic duct and shelling out the mucus membrane.
4. The infected gall bladder often with subacute symptoms the so-called "strawberry" gall bladder. In some of these cases we believe the gall bladder should be opened and ducts carefully explored before proceeding with cholecystectomy.
5. Carcinoma of the gall bladder. Most of the cases of cancer of the gall bladder follow gall stones and not frequently follow cholecystostomy for such. We have had five cases of cancer of the gall bladder in the last ten years, all of which had gall stones and have had an operation of cholecystotomy. We believe that these cancers would not have occurred if the gall bladder

had been removed instead of having been drained at the primary operation. We also believe that there are many unreported cases of cancer of the gall bladder until it would seem that it was a very serious question regarding the leaving in of an organ which has entirely lost its function which may finally be the seat of a cancer.

RESUME OF 100 CASES OF OPERATIONS ON GALL BLADDER TRACT.

Operations from Jan. 1st, 1919 to May 15th, 1920.

Male Patients	24
Female Patients	76
Youngest Patient	21 years
Oldest Patient	68 years
Average age	46 years
Average duration of symptom	7 years
Average duration in hospital	20 days.
Average time of hospitalization	1 day before operation.
Number of gangrenous cases	12
Number of empyemas	17
Number of cases with stones	87
Number of cases without stones	13
Number of jaundice at time of operation	15
Number of previous history of jaundice	31
Number of cholecystectomies	72
Number of partial cholecystectomies	11
Number of cholecystomies with cystic or common duct drainage	34
Number of cholecystectomies which has previous drainage	4
Mortality in all cases	6%
Cases of gangrenous gall bladder with acute pancreatitis and peritonitis	4
Cancer of the gall bladder	1
Cholecystectomy who died on the 10th day after the operation, probably from peritonitis from leakage of the bile	1

These cases were all operated at Harper Hospital with the exception of ten cases, and do not include cases operated upon by Dr. Angus McLean. I wish to thank my associates, Drs. W. R. Clinton, W. D. Barrett and L. B. Ashley, for their aid and valuable assistance, and Dr. J. J. Corbett, house surgeon at Harper Hospital, for preparation of specimens.

DISCUSSIONS.

Dr. H. E. Randall, Flint: It seems to me that Dr. Brooks' table showed that his cases came late, so many empyemas and so many cases that gave a history of jaundice. I am glad that he emphasized the point that gall-bladder cases should be diagnosed earlier than they are. It has been my good fortune to live during the creative period in abdominal surgery. In 1878, Kocher was operating by putting gauze around the gall-bladder and then six days later opening it up and taking out the gall-bladder. Then for a few years they used the anastomotic button through the gall-bladder. About the only cases that were operated before that time were cases that had dense adhesions to the abdominal wall. A big improvement in gall-bladder surgery came when we learned to properly place the patient on the table, with the use of sand bags and elevators to raise up the gall-bladder.

The next point is rotation of the liver and the technic is mobilization of the duodenum in some

of the cases. A few years ago the gall-bladder was stitched to the fascia and then was stitched to the peritoneum and finally was dropped back into the abdomen. Two new steps in technic which have recently come up are McArthur's putting a tube in the cystic duct and pouring solutions through that. Matas has carried that further and is feeding some of his patients through the tube. Deaver was opposed to "ectomy" early. He now advises it in almost every instance. From my little experience I am convinced that most of the cases in which stones reform in the gall-bladder are those in which the stones were not all removed at the first operation.

Dr. A. M. Campbell, Grand Rapids: This paper represents a great deal of work. When I hear a man say that he has done a certain number of operations of a certain type, I know it is a good many. If we look over our statistics we may think we have done a great many when we really have not. If this represents Dr. Brooks' personal work, it represents a great deal of work.

At present we are not operating on unknown pathology when we operate on a diseased gall-bladder. I think the time is coming when we will look on the gall-bladder like we do the appendix. Operations on the gall-bladder may be the simplest or the most difficult operations of surgery. It is very easy to watch a moving picture of how we remove a gall bladder.

A point that has not been mentioned is that there are certain anomalies in the anatomy of the cystic duct and cystic artery. We had an unfortunate experience ourselves in a case in which we ligated the common duct in which the anomaly was present. I think it is not a bad practice before opening the gall-bladder or going down into the cystic duct, to make sure we are not ligating the common duct. I think the main point is that these cases should be recognized early in their course. The technic is well known. Another point is that in all medical and surgical cases a careful history should be taken. I still believe that 90 per cent of all medicine is a careful history.

Dr. Daniel N. Eisendrath, Chicago: Dr. Brooks has given us an extremely honest paper, as those of us who know him would expect. It is a frank confession. He has brought out a number of very interesting points and one of them in connection with the question of mortality, because we have all had experience of that kind. In doing a cholecystectomy we have all had the misfortune to have the stump of the cystic duct open up on us, in other words, discharge its bile into the peritoneal cavity, when we did not want it. For that reason I have given up using any material for ligating the cystic duct except kangaroo tendon. You must remember the bile in the intrahepatic vessels and cystic duct is under pressure about as normal blood, 140 mm., as shown by Mann at the Mayo Clinic. In other words, there is a constant pressure to dissolve your ligature. For this reason I have taken no chances in using other material, except something I know will stay there for two or three weeks until we have an organization of our stump.

The Doctor brought out several other points,

one of which is very interesting to those of us who are in the field of kidney work. I see so many cases in which kidney lesions have been overlooked and the patients operated on for gall-bladder disease. Every month or so I have a case sent to me where some good surgeon operated for supposed gall-stone and it turned out to be an infected kidney. There is one little note of warning that I would like to sound. I think we should not be in a hurry to operate in gall-bladder cases, either acute or chronic, unless we have symptoms that simply cannot be misunderstood. Where we have chills, fever and pain in the right upper quadrant, we should not forget that a certain percentage of those are infections of the kidney. I saw a case operated on on Monday where in order to be perfectly conscientious to the patient I felt we must investigate the urinary tract before operating on the patient for gall-stones. This was done and when we operated it was a typical case of gall-stones.

The Doctor brought out a point about crises. It might be interesting to know that in the hospital with which I am associated, Cook County Hospital, the pathologist collected 1000 cases operated on for acute abdomen, of which 91 turned out to be gastric crises. These cases came into the examining room with a diagnosis of acute abdomen. I have seen patients come in with a great deal of pain in which it was difficult to say it was a crisis.

Dr. Brooks spoke of 35 cases of gangrene and empyema in which he did "ectomies." I have had so many black eyes in these cases that I try to sidestep. They do not stand operation well. They are bad operative risks. At our own state society last week Crile read a paper advising us to get away from doing so much in these acute cases. If you have to operate on them, go in quickly under local anesthesia, put in a tube and get out as quickly as you can, because we have not only infection and gangrene of the gall-bladder or empyema of the gall-bladder but every portion of the patient's intrahepatic bile ducts is infected and they die of cholemia or hepatic insufficiency, over which we have absolutely no control. I have made up my mind that I will not do a radical operation on these patients. The patient may have to come back for another operation, but at least I will have a live patient.

The x-ray will show, at times in the hands of very good operators, about 10 per cent of gall-stones. I heard a paper recently by George and Leonard of Boston in which they showed thickening of the gall-bladder in x-ray plates.

Another thing in connection with the common duct, I find the average man is apt to dismiss the subject with the statement that a patient cannot have a common duct stone because he has no jaundice. Do you know that only 80 per cent of common duct cases have jaundice? There has to be a stone blocking the duct to cause jaundice. The presence of chills and fever even without jaundice may indicate a common duct stone.

Before concluding I want to mention a complication that even an experienced man will forget after operating on the gall-bladder, that is, acute dilatation of the stomach. It happens more frequently after gall-bladder operations than is

supposed. It happens in highly neurotic individuals. The stomach instead of being a relatively small viscus will become so dilated that you will have the whole abdominal cavity filled up. Just the other day my intern called me and told me a patient was not in good shape. "Has he vomited?" "No." He may have an acute gastric dilatation without vomiting. The impression exists that patients with acute gastric dilatation must vomit. Dr. Bartlet has described this condition beautifully in his book on postoperative complications. The patient will look as though he were dying of peritonitis, the pulse goes up to 150 or 160, he looks blue, and shows great collapse and great dyspnoea. In about 90 per cent of the cases the patients will vomit. They have the characteristic vomiting that any nurse can be taught to recognize. They vomit like a child with meningitis without any effort. If you get that history over the telephone tell them to put in a stomach tube. It comes on rapidly and gets well just as rapidly.

Dr. Campbell mentioned anomalous cystic duct and artery. When I read my paper before the Chicago Medical Society one of my colleagues said, "These are the niceties of technic, but we do not usually meet them." Dr. Campbell is honest enough to say he has met them. When I read my paper in Boston five men got up and reported cases in which they had met these anomalies. I say this, anybody who is going to do gall-bladder operations should know that the normal anatomy is only present in about 80 per cent of the cases. What we are accustomed to be taught in our school work and what we teach our students is that in 100 per cent of individuals the cystic artery hits the gall-bladder at the junction of the cystic duct and neck of gall-bladder. It comes off from the right hepatic artery that goes up into the liver. That is all right in 80 per cent. In 20 per cent it does not happen that way and those are the 20 per cent in which a man strikes a second cystic artery that comes up from the gastroduodenal or a cystic artery that comes up from the other side, and he all of a sudden divides something that he thought was a strand of connective tissue. I want to simply call your attention to that. I make it a rule in every cholecystectomy to isolate the duct and artery separately and ligate them separately.

Dr. C.D. Brooks, Detroit (closing:) I appreciate what the discussors brought out. I think in a paper like this where you have so much to cover, the discussors take up so many things that you practically cover them all.

I think those patients who are very sick should never have ether. We never give them ether. We give nitrous oxide and oxygen and morphine just before operating. I operated on one patient who was so bad that I gave her two doses of morphine and my anesthetist played a tune on the gas machine without giving her any gas and we operated on psychology. If you operate more cases on psychology and less on ether and traumatism, more patients will live.

The point Dr. Eisendrath brought out about passing the stomach tube, is well taken. These seriously sick patients often die because the stomach tube is withheld. It is not necessary to

do lavage, simply passing the tube will empty the distended stomach. Do not wait for these cases to vomit. They will die first.

No patient who comes into our office is operated on until we have proved that the patient has not syphilis, as far as can be proven. If we prove that in an acute case we will not go wrong.

All we have in this whole thing is that it is simply up to us to find out what is wrong with the patient, not do anything until we have found out what is wrong, and then get him well as quickly as we can.

THE CURE OF CANCER OF THE CERVIX BY RADICAL ABDOMINAL HYSTERECTOMY—END RESULTS IN 47 CASES OPERATED UPON 5 OR MORE YEARS AGO.*

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As the title indicates this paper will be limited to the consideration of the radical abdominal operation for carcinoma of the cervix. This is not because I have had any reason to change my opinion regarding the desirability of performing the radical abdominal operation for carcinoma of the fundus for the results are better with the extended radical operation for both cancer of the cervix and of the fundus, but because the primary and end results for cancer of the uterus in the two locations differ so widely. The radical abdominal operation for carcinoma of the fundus is accompanied by a relatively low primary mortality with excellent end results while the same operation for carcinoma of the cervix will in my opinion for reasons to be set forth later always be attended by a high primary mortality with ever improving end results as the cases come earlier to operation. Moreover, I believe that all forms of treatment of uterine cancer should be similarly defined as to location of the disease, if we are to be in a position to discuss the value of a given treatment so far as end results are concerned.

In Michigan, at least, so far as the records of my University Hospital and private clinics are concerned, there is no evidence that cancer of the cervix is being recognized earlier, or if diagnosed is being referred to the surgeon earlier than was the case 15 years ago. Although I see a fairly large number of cases of uterine cancer yearly, most of them are too far advanced to even consider a radical operation. The operability of cases from the radical operative standpoint is from 15 to 25 per cent, a

percentage which has not increased during the past ten years.

This is a reflection upon the profession of the State and indicates one of two things: either the mass of the profession does not believe that even in the early stages cancer of the cervix can be cured, or it is grossly careless and negligent and neglects to warn patients with certain symptoms that they may have beginning uterine cancer, referring them to the surgeon only when it is too late to perform the radical cure.

PRIMARY MORTALITY AND END RESULTS.

My experience with the radical abdominal operation for cancer of the cervix dates from 1902. During these eighteen years I have seen in the University and private clinics 380 cases of cancer of the cervix and have judged 60 favorable for the radical abdominal operation. There have been 16 primary deaths in the 60 cases or a mortality of 26.6 per cent.

Taken alone such a high mortality would tend to discourage any operator and tempt him to abandon the operation. He is only justified in so doing, however, if after repeated conscientious efforts his high mortality is attended by corresponding poor end results. As I have pointed out in previous papers, it is essential in arriving at any just conclusions regarding the value of the radical abdominal operation for cancer of the cervix to consider the primary and end results together. With very few exceptions what is commonly called a recurrence after the radical operation for cancer of the cervix comes within five years. I have had one case of recurrence six years after operation for cancer of the cervix and one rather remarkable case where there was a recurrence seven years after the radical abdominal operation for cancer of the fundus. Ries reports a recurrence in the inguinal glands nine years after a radical operation for cancer of the cervix. Other cases of recurrence after five years have been reported but they are rare. Therefore, we are justified in assuming that if a patient shows no signs of recurrence for five years she may be considered cured.

Merely brief consideration of primary mortality and end results will show how closely dependent they are upon each other. If an operator for fear of primary deaths fails to be thorough in his radical operations, if in other words he dodges the issue and does not really perform the radical operation his primary mortality may be quite gratifying but very few of his operated cancer of the cervix patients will live beyond the five year period. Again if he

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sticks to the principles of the radical operation to the bitter end while his primary mortality may be high, his ultimate results may be exceedingly gratifying.

End results to be of any value must be figured in the same way. Wertheim's rules are simple, sensible and quite frequently followed. Under these rules the percentage of permanent cure of all patients operated upon by the radical abdominal operation is obtained by dividing the number of patients alive and well and free from recurrence after five years by the total number of operations performed five or more years minus those patients lost track of and those dying of intercurrent disease. The percentage of permanent cure of those surviving the radical operation is obtained by dividing the number of patients alive and well and free from recurrence five years or more after the operation by the total number of patients operated upon five years or more minus those dying from the operation, those lost track of and those dying of intercurrent disease.

Statistics are of no value unless they are accurate and based upon reliable data. It requires a great deal of time, labor and patience to keep track of postoperative patients and to determine accurately whether they are free from a certain disease. But the satisfaction to be derived from tracing the patients and hearing from them and their physicians is worth the labor. I am pleased to report that all the patients surviving the 60 radical operations for cancer of the cervix have been traced so that an accurate report of end results can be made in my own cases.

So far as end results are concerned we are only interested in the cases which were operated upon five years or more ago. There were 47 such cases (Table 4) with 14 primary deaths, 3 dying of intercurrent disease and 18 patients remaining alive and free from recurrence five and more years after operation. According to Wertheim's formula (Table 4) the percentage of permanent cure of all patients operated upon is shown to be 40.9 while in Table 5 the percentage of permanent cure of patients surviving the operation is shown to be 60.

I realize that sixty cases is a small number in comparison with the material of some operators. Still the number is large enough to enable one to draw certain conclusions. The primary mortality (26.6%) is high but the percentage of patients living and well five years and more after operation (40.9) is gratifyingly good. So also is the percentage of permanent cures (60) of those who survived the operation. After considerable labor I have been able to

collect from the literature 1191 cases¹ of the radical abdominal operation for carcinoma of the cervix where the above percentages have been accurately worked out (Table 6). A comparison with the percentages in my own cases is very interesting and absolutely proves what has been stated before regarding primary mortality and end results. It will be seen that while the primary mortality in the 1191 cases was considerably lower than in the 60 cases (18.4% as compared with 26.6%) my percentage of permanent cures of *all* patients operated upon five or more years was higher (40.9 as compared with 39.4) than in the 1191 cases. There is only one conclusion, so far as I can see, to be drawn from a comparison of these figures. More patients were lost primarily in the personal series because the endeavor was made in every case to carry out the principles of the radical abdominal operation. Where mistakes had been made as to the extent of the disease or where poor judgment had been exercised as to the vitality of the patient prior to operation, primary death was a result because an extensive operation was performed in each case. As an additional proof may be cited the causes of death set forth in Table 7 where shock either alone or accompanied by hemorrhage accounted for ten of the sixteen primary deaths. Yet, in spite of the handicap of a large primary mortality, in the long run because the cancerous disease was removed through the extensive operative procedure more permanent cures resulted, that is, proportionately more lives were saved than where the primary mortality was lower, as was the case in the large series of collected cases. Obviously it does not follow that a high primary mortality will be followed by good end results or that a low primary mortality will show poor end results. As shown by the reports of quite a number of operators, either because of the skill of the surgeon, the good judgment shown in the selection of cases suitable for the radical operation or possibly because of the nature of his material a low primary mortality will be followed by excellent end results.

SELECTION OF CASES FOR THE RADICAL OPERATION.

As has been pointed out many times before but should be emphasized in any paper upon this subject, it is not always easy to determine by bimanual or rectal examination the extent of the cancerous process beyond the cervix. Unfortunately in the large majority of cases the uterus is fixed, the broad ligaments invaded

1. Busse, Cobb, Kelly, Neel, Sampson, Taussig, Wertheim.

and the whole picture is that of far advanced cancer inoperable so far as the radical operation is concerned. The border line cases where there is good movability of the uterus should all be placed among the doubtful cases, the final decision possibly not to be definitely arrived at until after exploratory laparotomy. The most careful and searching investigations should be made of the physical condition of prospective radical abdominal hysterectomy patients with a view of excluding those whose vitality does not warrant their undergoing such a severe operation. It is poor surgical judgment to perform this operation upon patients whose renal function is below a certain point, whose blood pressure is high or whose heart action is impaired. While the technical difficulties of performing the extended operation for cancer of the cervix can be overcome in markedly obese women, such a patient is usually a poor subject for any operative procedure and should be excluded on the ground of too great risk. When I say that the radical operation under discussion will always be attended by a high primary mortality, I have in mind not the impossibility of overcoming the technical operative difficulties but the inherent difficulties surrounding the estimation of the vitality of a given patient. Advances will come in the perfection of all measures tending to place us in a better position to estimate the vitality or debility of a given patient.

CAUSES OF PRIMARY DEATH.

In addition to mistakes made in the selection of cases, where the case was too advanced to be operated upon yet the operation once started had to be carried through, the most common cause of death was shock with or without excessive hemorrhage and peritonitis. In Table 7 have been enumerated the causes of death in the 16 cases dying as a result of the operation. As before pointed out 10 out of 16 were due to shock either with or without excessive operative hemorrhage. Undoubtedly a number of these patients would not have died had the operator at the time had the experience derived from these sixty operative cases. A great deal of time was wasted in locating the ureters and tying the uterine arteries. No time is lost at present upon these procedures. Just the little procedure of removing the loose tissue covering the ureters after the broad ligaments have been opened, so that the ureters are brought into plain sight, saves much time. It also aids in the clamping of bleeding pelvic veins since no fear is felt that the ureters will be seized by the hemostats.

The more one performs the radical abdominal operation the less bleeding he encounters, although with the greatest precautions and care serious bleeding may occur.

I am still opposed to the exaggerated Trendelenburg position in this operation, especially in the cases of obese patients. Excessive weight upon the diaphragm impedes respiration and undoubtedly increases shock. It is better to use the moderate Trendelenburg after packing back the intestines while the patient is in the exaggerated position.

Peritonitis can only be avoided by the most scrupulous and painstaking disinfection of the septic cervix prior to the opening of the abdomen. At present I am using the curette and actual cautery followed by the pouring of iodine into the vagina, iodine gauze being packed against the cervix. I am not now using the right angled clamps trusting to their preliminary cervical and vaginal disinfection for protection against peritonitis and implantation metastases. The edges of the cut vagina are, however, run over by the actual cautery before closing over with peritoneum. Personally I do not like the clamps and will do away with them if I can. However, cases will be watched carefully and if more local recurrences take place after this method I shall return to the clamps. Only the retroperitoneal spaces should be drained. Vagino-pelvic drainage is unnecessary and apt to give rise to rather than prevent general peritonitis.

RECURRENCES.

There have been 14 recurrences after the radical operation for cancer of the cervix, 9 out of the 14 recurrences taking place the first two years after the operation (Table 9). A rare case of recurrence occurred 6 years after operation, as before stated. Each patient should be warned before leaving the hospital of the danger of recurrence and should be advised to report frequently either to the operator or to a competent physician. It has been my experience that after the patient has been free of the disease for a number of years she is apt to grow careless and will not even answer letters of inquiry until repeatedly written to.

I beg leave to quote some of the conclusions set forth in my last paper on this subject as I have seen no reason for a change of opinion since the article was published in 1916.

TABLE 1.
Cancer of Cervix.

Number of cases	380
Radical abdominal hysterectomy	60
Percentage of operability	15.7

TABLE 2.

Cancer of Cervix.

Radical Abdominal Hysterectomy.

Number of cases -----	60
Primary deaths -----	16
Primary mortality -----	26.6%

TABLE 3.

Cancer of Cervix.

Radical Abdominal Hysterectomy.

Number operated at least 5 years -----	47
Primary deaths -----	14
Number dying of intercurrent disease -----	3
Number well at least 5 years after operation --	18

TABLE 4.

Cancer of Cervix.

Radical Abdominal Hysterectomy.

Patients operated upon at least 5 years -----	47
Patients lost track of -----	0
Dying of intercurrent disease -----	3
Well at least 5 years after operation -----	18
Permanent cure of all patients operated ----	40.9%

TABLE 5.

Cancer of Cervix.

Radical Abdominal Hysterectomy.

Patients operated upon at least 5 years -----	47
Primary deaths -----	14
Lost track of -----	0
Dying of intercurrent disease -----	3
Well at least 5 years after operation -----	18
Permanent cure of patients surviving operation -----	60%

TABLE 6.

Cancer of Cervix.

Radical Abdominal Hysterectomy.

Collected and Personal Cases.

Number of cases -----	1191—60
Percentage of primary mortality -----	18.4—26.6
Percentage permanent cure all patients operated upon -----	39.4—40.9
Percentage permanent cure all patients surviving operation -----	48.9—60

TABLE 7.

Cancer of Cervix.

Radical Abdominal Hysterectomy.

Causes of Death.

Shock -----	10
Peritonitis -----	3
Embolus -----	2
Pyelonephritis and uremia -----	1
	16

TABLE 8.

Cancer of Cervix.

Radical Abdominal Hysterectomy.

Patients well 12-17 years after operation ----	6
Patients well 7-12 years after operation ----	12
Patients well 1-4 years after operation ----	9
	—
	27

TABLE 9.

Cancer of Cervix.

Radical Abdominal Hysterectomy.
Recurrences.

1 year after operation -----	5
2 years after operation -----	4
3 years after operation -----	2
4 years after operation -----	2
6 years after operation -----	1
	14

CONCLUSIONS.

1. Further experience with the radical abdominal operation for cancer of the uterus confirms the belief that it is an exceedingly dangerous procedure and will always be attended by a high primary mortality.

2. Even if the percentage of operability of cases of cancer of the uterus markedly increases in this country and elsewhere there will always be border line cases attended by a high primary mortality.

3. This is true because it is not always possible even with the greatest care in examination of the patient prior to operation to estimate the extent of the disease.

4. Errors in judgment mean death from shock if the disease be too far advanced or failure to complete the radical removal of the cancerous uterus.

5. However, in spite of high primary mortality it is the only procedure with the possible exception of the extended vaginal operation which holds out any reasonable promise of a permanent cure.

6. Primary and end results of the radical operation for cancer of the uterus must be considered together in order to judge of the good accomplished in a given series of cases.

7. Unless the operations be radical the end results will be poor and if they be radical the primary mortality must be high.

8. If the end results be poor the burden of proof is upon the radical abdominal operator to show why he did not choose a much safer palliative procedure.

9. In spite of the high primary mortality the end results in those surviving the operation encourage us to continue with the procedure in suitable cases.

Dr. Walter W. Manton, Detroit: I think if anyone has seen Dr. Peterson do one of these operations they will realize why he has such splendid end results. The operation as Dr. Peterson does it demands his utmost work every minute of the time, with the close co-operation of close assistants. He leaves nothing to be desired in the point of safety for everything suspicious is removed.

Dr. L. W. Knapp, Detroit: I would like to ask the Doctor if inflammation of the fundus, non-circumscribed, is accompanied by more risk than inflammation of the cervix as he described it.

Dr. Ward F. Seeley Detroit: I hate to let this paper pass by without giving it its just dues. It has been my privilege to assist Dr. Peterson during my four years of service with him in the University Hospital in a large number of these cases, and one cannot help being impressed with the thorough manner in which the work is done. While Dr. Peterson rather deplors his high primary mortality, those of us who have worked with him and watched the patients cannot help being impressed with the fact that while his primary mortality is high the splendid end results more than justify his procedure. I think the splendid results he has obtained will bear the closest scrutiny by anyone. To my mind, the radical treatment has a place.

The Doctor has requested that we say nothing of radium in the treatment of these cases in the discussion, which would be to open up a still wider field. It might happen, however, that the combination of operation and radium, used as we used to use the cautery, will increase to a large extent the operability of these cases. Of the 380 cases he has seen those that were actually operable were very few, and the proper application of radium over short periods of time will probably do much toward rendering many cases we have thought inoperable operable, so they can receive the benefit of surgical treatment. Of course, as yet it is too early to predict anything about the radical cure of carcinoma of the cervix by radium alone. Time is the only thing that will tell us anything of that, and by the working out of a definite technic, which I think will come, and watching these cases over a long period of time.

Dr. C. E. Boys, Kalamazoo: Dr. Peterson's remarks bring out the seriousness of cancer in any place we find it. It is not a condition to be played with, wherever it is found. It is like an adder and we should put our heel on it and stamp it out everywhere we see it, go the limit or else not tackle it at all.

Dr. Reuben Peterson, Ann Arbor: I think the Chairman, Dr. Boys, perhaps did not intend to convey the impression that patients with cancer of the cervix should not be treated at all. He means so far as the radical operation is concerned. One can do a great deal with the palliative form of treatment. We have had very good results from the use of the actual cautery. In fact, on a recent visit to the Memorial Hospital in New York, where they have a large amount of radium, and where I went over with Dr. Bailey many of his cases, I found that in most cases his results were no better than those I had obtained with the cautery. I mean of course those cases

of cancer of the cervix where the radical operation was contraindicated.

In regard to carcinoma of the fundus, it is wonderful the results one obtains by simple removal of the uterus without tying the uterine arteries outside of the ureters. I remember a number of cases where I operated by this method and gave an unfavorable prognosis, and yet those patients are alive and well today. The reason is that cancer of the fundus does not extend as quickly or as extensively as cancer of the cervix.

No one will be more glad than I to give up the radical operative treatment of cancer of the cervix. If the radiologists are able to show that they can cure cancer of the cervix, I will be very glad to stop using the radical operation but, as Dr. Seeley has said, that is a matter to be demonstrated later. I feel that at the present time the use of radium is simply an aid to surgery and that it will not replace surgery. One point may interest you, the men who are using radium are in accord that either the radical operation for cancer of the cervix should be performed a week after the application of the radium, or if that time goes by it is better to wait a number of weeks before performing the radical operation. This is because it takes about a week for the radium to get in its work and when it has the operative difficulties are enhanced, whereas if you let the case wait over a number of weeks, or perhaps a month, the inflammatory condition has subsided and the operation is much less difficult.

TONSILLECTOMY FOR FOCAL INFECTIONS.*

RAYMOND D. SLEIGHT, M.D.,
WILFRID HAUGHEY, A.M., M.D.

BATTLE CREEK, MICH.

The subject of focal infections has engaged the attention of medical men by spells for a century and a third. The relation of rheumatism and tonsils being the first to attract attention in 1789, but the subject received very little attention until about ten years ago. Since Billing's classical paper on "Focal Infections," almost everything in the gamut of human disease has been laid to focal infections. The source of infections has been variously placed in the nasal sinuses, the tonsils, the teeth, the appendix, the gall bladder and elsewhere. These organs have received operative attention to a large extent with good results.

King, of New York, last year collected a list of thirty-one conditions that had been laid to Focal Infections in the head, mostly tonsils

*Read before section O. A. R. L., M.S.M.S., May 26, 1920.

and had been benefitted by treatment of their conditions. The list was: neurasthenia, neuritis—reflex or remote result, neuralgia, myalgia, myositis, arthritis—acute subacute or chronic, osteitis, periostitis, gout, Basedow's disease, furunculosis, sepsis, endocarditis, pericarditis, myocarditis, chorea, arteriosclerosis, meningitis, pleuritis, bronchitis, asthma, pneumonia, nephritis, pyelitis, cystitis, gastric neurosis, peptic ulcer, appendicitis, colitis, cholecystitis, herpes zoster. To these he adds three others, dacryocystitis, conjunctivitis and urticaria.

The literature of focal infections is so voluminous now that any paper is necessarily largely a repetition. We will therefore merely mention the general subject and confine our attention to case reports, incidentally adding two other conditions to the long list above—bunions and exophthalmic goitre. In the presence of focal infections and when looking for the primary cause, we depend largely on whether liquid pus is expressible or obtainable from the tonsillar crypts. The absolute proof would of course be to isolate the infecting organism then possibly use it as a vaccine, but we have found that we are able to recognize these infecting tonsils in most every case, as results of removal have shown. We are only reporting a few cases from among hundreds.

Case 1 Fred P., Union City, Michigan, referred by Dr. W. H. H., March 18, 1915. This man walked into the office all doubled up, stooped forward and leaning to the right with his right hand pressing on his right loin. He had been this way for eight months having been treated by numerous physicians and several osteopaths with no improvement. Placed upon the table, either on his face or his back, he was able to straighten out like any normal man, but the moment he attempted to stand, he had intense pain in his back and his posture was as described. The internist thought that he must have some bone necrosis or, at least, some inflammatory condition of the vertebrae of the lumbar region. He had several x-ray taken which showed nothing. The x-ray findings together with his posture upon lying suggested focal infection and the man was referred to me for examination.

I found his nose and sinuses normal. There was nothing wrong apparently with his teeth, although a dental examination was not made. He had no history of sore throat but upon making pressure upon the tonsils, liquid pus was secured. This man refused operation. We, therefore, took a culture of this pus and had an autogenous vaccine made which was administered. Within ten days, the man's back was normal and he soon returned to his work.

Case 2. Mrs. G., Feb. 7, 1920, Dr. A. A. H., asked me if I would see this patient with him

with a view of finding source of focal infection. She had been confined to her bed for over two weeks with inflammatory rheumatism, her hands and feet swollen until they were purple and almost every joint in the body very tender. She could not move hand or foot; had a temperature varying from 102 up. Examination was made at the house. She had history of sore throat about a week before the present attack of rheumatism. She had had these attacks before. The tonsils were large, semi-submerged, folded on themselves and with a considerable expressible liquid pus. I advised removal of the tonsils after her present condition had recovered but her condition not improving after five days Dr. H. requested me to remove tonsils at once which was done at her home and while her temperature was above 102, cocaine anesthesia. The next day there was a slight elevation of temperature. The second day, the temperature began to come down and the swelling of the hands and feet to disappear. The evening of the third day, her temperature was normal and the fourth day, she walked to the dining room and ate dinner with the family. I saw her husband a few days ago and he told me she was feeling fine.

Case 3. Mr. H. E. B., age fifty-five, for several months had rheumatism, in the hands, joints swollen, hands purple, could not attend to his work, that of factory administrator, and had been going to various places and taking various cures. Examination of his nose and throat showed the sinuses free but liquid pus in the tonsils. We removed his tonsils October 17, 1919. Within a week, the swelling of his hands had disappeared and within two weeks, the tenderness of his joints was all gone and he had returned to work. I have seen him every few days and he is as chipper as can be.

Case 4. Mr. A. D. W., a banker about fifty-four. For a year or more he had been having rheumatism or rather neuritis of the right arm which had developed to the point that he was unable to raise his arm to the level of his shoulder and was unable to write. He had even commenced signing his name with his left hand. Examination of the teeth negative, examination of the sinuses, negative. He had never complained of sore throat but the tonsils were the size of a small ripe olive, submerged, not especially inflamed or scarred, but presenting liquid pus upon pressure. These tonsils were removed under cocaine anesthesia July 30, 1919.

The pain in his arm disappeared within a few days and within a month he was able to write and to use it as usual, returning to his position as cashier in a bank.

Case 5. Rev. F. H. B., for a number of years had been troubled with repeated attacks of iritis and corneal ulcers. He had bad teeth which were extracted but the condition continued. The sinuses were normal but he had frequent sore

throats. His tonsils were very large with deep angry crypts and with liquid pus freely expressible. These tonsils were removed under local anesthesia, Dec. 11, 1919 and immediately the condition of his eye began to improve. He has had no eye trouble since.

Case 6. Grace C. Kalamazoo, Michigan, a high school student. While taking gymnasium work became easily exhausted and was ordered to report to the examining doctor. He found a weakened condition of the heart muscle and ordered her to take no more gymnasium exercises but ordered her to have her tonsils removed. She presented herself to me. Her tonsils were moderately large, prominent, not scarred but with a few very red crypts from which liquid pus was easily obtained. These tonsils were removed November 7, 1919. Her bad breath was cleared, she is feeling more fit and has returned to her gymnasium work which she is able to do without difficulty.

Case 7. Mr. W. E. B., referred by Dr. G. This patient had been in the hospital nearly three weeks with inflammatory rheumatism, hands and feet swollen, temperature around 102, confined to the bed, nearly helpless. His tonsils were large, very red, with deep angry crypts, and profuse pus. They were removed under local anesthesia and in five days time, the patient left the hospital to return to his work.

Case 8. Mr. J. C. R. This man had had rheumatism for several years. Would have an attack of sore throat followed in about a week by an attack of rheumatism. Five years ago, I advised him to have his tonsils removed because of his history. On November 15, 1919, I removed his tonsils. Since that time, he has had no further attacks of rheumatism and his wife tells me he has put on weight and has not missed a day from his work. He, not only paid for this operation but he paid a five year old bill which I had previously been unable to collect.

Case 9. Mrs. Fred F., age thirty-eight. First saw her eleven years ago in an attack of tonsillitis which was followed a week later by acute iritis in right eye. She had frequently had such attacks which had been diagnosed "Rheumatic Iritis." This attack began Feb. 25, 1909. Feb. 1, 1913 following a sore throat, had an attack of Episcleritis, left eye. In May 1914 had another attack of episcleritis, left. In November 1917, while I was in France, she had an attack of iritis right eye. October 25, 1919 had an attack of iritis in right eye which persisted. Advised removal of tonsils but she declined and went to the Battle Creek Sanitarium for examination. Nov. 11, 1919 she returned and begged to have her tonsils removed or anything done that would relieve her pain. Tonsils removed. Nov. 12, to Nov. 14, pain in eye all gone, pupil freely dilated which it had not been before in spite of using

atrophine every hour at home and redness all gone. She had a perfect recovery.

Case 10. Mrs. A. C. had been suffering for a long time with neuritis unable to raise her arms and suffering pain in both arms. She had large submerged tonsils (with deep angry crypts and abundant pus) which were removed Oct. 1, 1919. Her neuritis disappeared within a week and has not returned.

Case 11. Mrs. John G., a doctor's wife has suffered from painful bunions for five years and bad breath. She had one of these bunions operated on at Ann Arbor but the doctor refused to touch the other until she had her tonsils removed. The tonsils were small, flat, very much scarred and with small amount of liquid pus expressible. They were removed Feb. 22, under local anesthesia and her husband tells me that the pain in her bunion had gone by the time she was around again, and has not bothered her since.

Case 12. Pauline K., age 22, referred by Dr. Gage. She had a slight enlargement of the thyroid with very rapid pulse, nervous symptoms and other typical symptoms of exophthalmic goitre before the development of exophthalmos. She had large cryptic tonsils with freely expressible pus but she did not complain of much throat symptoms. We removed the tonsils under local anesthetic after which her pulse returned to normal, her nervousness is gone and Dr. Gage tells me she is entirely well. The goitre has subsided.

Case 13. While in service in the army at Base Hospital, Number 36, in France, we accumulated one ward of chronic rheumatism cases which had been in the hospital varying from several weeks to two and three months and the ward surgeon seemed to be unable to get them back on the line. There were thirty-nine of these cases and this was September 1918. One day he inquired my opinion as to what should be done. I asked for the privilege of examining the noses and throats. Dental examination had already been made and either found negative or conditions corrected. Of these thirty-nine cases, I found liquid pus in thirty-seven. The tonsils were removed and within three weeks, every one had been returned to duty with his rheumatic condition cured or at least giving no further trouble.

DISCUSSION.

Dr. Walter Parker, Detroit: Mr. Chairman. This is a very interesting group of cases that have been presented, and the clinical observation following the treatment of these cases seems to prove that because of the relief of the focal infection, that was the thing responsible for the symptoms present.

I see only the effect of focal infections in the eye. The Doctor has spoken of his case of iritis, which we so frequently see, and which is called rheumatic or what not, and which does not clear until the focal infection is relieved. I think there

can be no possible doubt as to the connection between certain cases of iritis and uveitis and scleritis and focal infection; there can be no doubt that certain of these cases are due to focal infection.

Now I think I will be willing to carry the process one more step forward, and say that any case that is to be treated surgically should first have every possible source of infection removed. It is not inconceivable, it seems to me, to think of a patient being able to carry a certain amount of infection. He has an immunity up to a certain point, to a certain degree. If you give him a trauma in any part of his body and there will light up an inflammation, the border of his immunity will have been crossed, and he no longer can carry the load plus the effect of the trauma incident to operation.

Take a cataract operation, for instance. I am not so sure but that in some of our cases we go beyond this border and they give us a bad result. I think it is only good surgery before any cataract operation is performed, to see that all possible sources of focal infection are relieved, and perhaps the most common for us now are the tonsils and the teeth. I feel certain that by a careful cleaning out of these foci better average results will be obtained.

Dr. Claire Straith, Detroit: Dr. Parker hit upon something that has appealed to me. It seems to me that in many of these throats that we look into that have chronically diseased tonsils or acute diseased tonsils we find that many of these occur in mouths that are very susceptible; many of them have abscesses and many of them broken down teeth which show on the surface, without even an x-ray, that there is undoubtedly an abscessed condition near the roots. I have seen many tonsils removed in cases where the teeth are not first x-rayed, and where this possible source of infection, that is, broken down teeth, etc., not first removed.

Another thing that occurs in my work around the teeth is the frequency of recurrences, in some cases, after apparent cures. Many times in x-raying teeth we find that there is a definite area of infection; these teeth are removed, and there is, apparently, a cure for some time, and then subsequently the infection lights up again and the patient has a so-called recurrence, even though you are quite sure that the entire focus of infection was entirely removed at that time. I don't believe then that in many of these cases where there is a definite pathological change which has taken place either in the joint or the eye, or wherever it is, that they can be entirely cured by removing any foci of infection. Any one doing this work knows that in many of these cases the cures apparently are miraculous, but these cases should be carried out and followed more thoroughly, because, as I said, these cases frequently have recurrences of infection.

Dr. M. E. Vroman, Port Huron: I notice that most of the cases referred to in the paper we have just heard read were entirely acute conditions. And I think possibly the reason he had such very flattering results in all of those cases was because of the acuteness of the conditions that he was laboring with.

McCallum of London recently gave a paper on "Focal Infections," taking up chronic conditions as well as acute conditions, and in his paper he made this statement, that the teeth may even be x-rayed, we may have active abscesses or latent ones, we may have diseased tonsils, we might remove all of the teeth, we might remove the tonsils thoroughly, and still we should expect to go along for three to six months or possibly a year before finding the real result of those treatments. And the point that I noticed especially in Dr. Haughey's paper was that most of his cases were acute conditions.

I would like to ask Dr. Haughey if he has followed that same logic along in any chronic conditions, and what the results have been.

Dr. Harold Wilson, Detroit: There is just one point that the chair wants to speak of, and that is the ease with which so many people get liquid pus from the tonsils. I see a few tonsils, and I see some pus—elsewhere for the most part. But to take a tonsil and squeeze it with a tongue depressor and get liquid pus from the tonsil is a feat that I cannot so easily accomplish; that is something that I cannot accomplish as easily as it is accomplished by my confreres, and I wish I could be told what the technic of getting pus is.

I can get a little mixture of saliva and broken down caseous matter from the tonsil when I have pressed it with a separator or tongue depressor, but this broken down caseous matter is not pus, as far as I can understand it. Maybe I don't know what pus is. But I must confess that I cannot get liquid pus from the tonsils with that consummate ease with which some of my confreres succeed in doing it.

Dr. H. G. Bartlett, St. Joseph: I wish to ask a question. Has Dr. Haughey ever had any acute exacerbations of rheumatism after removing tonsils? I have had two cases that have improved somewhat and then were operated on, and then got acute exacerbation from it. One of them died of endocarditis, and the other one after several months, finally recovered. I would like to know if Dr. Haughey has had such experiences.

Dr. M. E. Vrooman, Port Huron: Speaking of liquid pus, I have had the same experience that our chairman has had. I do not get it in most cases by squeezing a tonsil. You can remove a tonsil without, perhaps, any trauma, but in how many of those tonsils, if you will dissect them after you remove them, will you find free liquid pus?

I don't believe it is necessary that we should

have free liquid pus to produce the results. I believe that broken down caseous material of itself is septic, and I believe that most of the germs are strepto cocci, and that there is a mixed infection.

Quoting McCallum again: He says that the germ that produces our trouble is an aristocrat; he says it never goes in by itself, but that it rides in on another germ of less virulence.

I don't get much pus. Maybe I don't know how to squeeze them, either.

Dr. Wilfrid Haughey, Battle Creek: In answer to the statement in regard to acute conditions, I wish to say that the woman whose case I cited, and whom I had been treating since 1909, was certainly not an acute case. She every little while had an acute attack or an exacerbation of her iritis. She got perfectly well.

The case of the banker who had practically given up his business and had been suffering for months could hardly be called acute.

The case of the administrator who had practically been forced to give up his business, and had been going all over seeking for cures, and who had been suffering for six or eight months, was hardly acute.

Of course it took from two to three weeks for these cases to clear up from these conditions. Some of these cases I will admit were more or less acute, and yet they had been having these attacks repeatedly.

The bunion that had lasted six years was not acute.

The exophthalmic goitre was acute.

Now I don't see any reason, however, why you can not effect relief from acute conditions just as well as you can from chronic conditions, and I don't see why it is not of just as much benefit to the patient.

Now as far as liquid pus is concerned, I think that it is possible if you have got the pus in the tonsil to squeeze it out with the tongue depressor. But I will say this, that I don't find liquid pus in every tonsil that I examine. Far from it. And I sometimes find caseous matter which I do not call pus. You know that immediately after a patient has drunk a glass of milk you sometimes can squeeze milk out of a tonsil. But if you examine the tonsil some hours after a meal and you do by pressure secure a little liquid pus or pus-like substance, why I think that is a pretty good tonsil to get busy and look after.

My technic in squeezing those tonsils I think is just the same as that of every one else who squeezes tonsils. I just press the tongue depressor against the anterior pillar and turn it forward, and frequently I do find pus, and I have found pus in the tonsils after they were removed, although you ought not to expect to find very much in a tonsil that has been removed, because your tonsil has been squeezed a little by the wire loop in removing it. Sometimes that pus will

shoot clear across the throat in taking out the tonsil.

I have not done any bacteriological work to determine the exact organism in these cases, but there has been a lot of bacteriological work done, and a good many reports, and the majority of them seem to be of the opinion that they are streptococci, and I am not denying that—I think they are.

.. CONSERVATIVE NASAL SURGERY.* ..

HOWARD W. PEIRCE, M.D.,
DETROIT, MICH.

The Internist and the suffering patient are depending more and more on the Rhino-Laryngologist to help them clear up their cases of focal infection.

Such diseases as asthma, rheumatism, myocarditis, endocarditis, nephritis, thyroiditis, glandular and pulmonary tuberculosis, with a possibility of appendicitis, cholecystitis, peptic and duodenal ulcer, have been proven, clinically at least, of frequent nose or throat origin.

In the field of preventive medicine we have a large task before us in so caring for the young that they do not fall heir to the above diseases.

The last few years have seen our profession change from a group of "squirtdog artists" to surgical specialists.

Our late text-books abound with descriptions of obsolete operations, with no word of warning to the beginner that these operations are no longer performed by the up-to-date surgeon.

We hear of and we see patients recently operated on by these older methods, by men standing well in our profession. The wrong operation is performed, the patient is not improved. Either a mechanical result has been produced that makes it impossible to re-operate or the patient's faith being shattered, he prefers to go along in misery rather than risk the uncertainty of another operation. You see these cases nearly every day. It is not the fault of the surgeons of any one section. We see them coming from the medical centers of Europe, the large cities of our country, as well as from our local profession.

I wish to call to your attention some of the obsolete operations that appear in our text-books and are still being performed, that should be discarded for newer methods. Even our late text-books give in detail the technic of Asche's operation on the Septum; the Bosworth's Saw operation; Robert's, Gleason's, Kretschmann's and others.

*Read before section O. A. R. L., M.S.M.S., May 27, 1920.

While one must admire the ingenuity of these men originating these operations, and it is interesting to study the progressive steps in the development of our present submucous operation yet all these operations should be discarded and when recorded in our text-books, it should be emphatically stated that these operations were no longer considered good nasal surgery. One may still see patients who have been operated on recently by the Bosworth Saw, the Gleason or Sluder methods. The condition calling for any of the above operations may be remedied better by the submucous resection of the nasal septum. There are many modifications of technic for this operation, which one must choose from, depending on the type of mechanical obstruction, and the operator's preference. Suffice it to say that the surgeon must perform his operation carefully and thoroughly, removing all the obstruction compatible with safety to the structural frame of the nose. I feel that we err in not taking enough time for this operation. I do not believe that a good result can be obtained in the 10-15 minute operation boasted of by some of our profession. In our haste only the cartilagenous portion of the septum is removed; a superior maxillary or a vomer spur or ridge is left, which impinges on the inferior turbinate and blocks anterior drainage; most important of all, the deflection or thickening opposite the middle turbinate is not removed, and we have not improved the aeration and the drainage of the nasal sinuses.

A submucous resection under ether anesthesia is not as satisfactory as under local, as ether and adrenal solutions do not work well together, and by some are considered dangerous; and without the adrenal solution there is usually too much hemorrhage for a good result. It may be needless to say that a submucous operation should not be performed during acute inflammations of the ear, nose or throat; during an acute sinusitis, unless necessary to establish drainage; during the active stage of Lues, during pregnancy or in the presence of other grave diseases.

In considering the promiscuous amputation of turbinates, one is forced to the conclusion that many Rhinologists never use an adrenal solution to shrink down the nasal mucosa; never explore the nose, before operation, further than the vestibule; never transilluminate or have an X-ray of the accessory sinuses.

I beg to assert that the rhinologists should consider the turbinates *sacred*, to be removed only as a last resort. To prove this, I would remind you that the turbinates are almost never the primary cause of the nasal obstruction. Either you have an acute or chronic sinusitis, a deflection, thickening, spur or ridge of the nasal septum, as the cause of the hyperaemia, hypertrophy or hyperplasia of the turbinate bodies, and the appropriate operation on the septum or sinus will correct the trouble. I am, of course, excepting malignant growths, polypoid degeneration and the concha bullosa or cystis turbinate. When necessary to operate on the inferior or middle turbinate, a submucous resection of the turbinate as after the Freer or Yankhauer methods, should be performed in place of a turbinectomy by the scissors, snare, saw, spokeshave or cautery. This procedure will go a long way in preventing those dry crusty noses that are such a nightmare to both the patient and rhinologist. While not so dire results attend the removal of the middle, as in that of the inferior turbinate, the former also should be spared whenever possible for a structure with such important functions as olfaction, heating and moistening the inspired air, filtering out the dust and bacteria, and directing the air current through the Nasopharynx and Larynx with the minimum of irritation, is too important to sacrifice unless no other mode of procedure is open.

Which of you gentlemen, having in your home a radiator of just sufficient size to properly heat a room, with an attachment to purify the air that is supplied to this room, because this apparatus was large and somewhat in the way, would have one third or one half of it removed, and suffer the discomforts of the cold and impure air necessitated by the reduction in size? Would you not rather make alterations in your room to produce the desired space, without the attending discomforts! Why not be as reasonable about a man's nose?

I believe all the sinuses, with possibly the exception of the sphenoids, can be properly drained without sacrificing the turbinates. The operations to accomplish this I will discuss shortly.

Acute sinusitis should not be operated upon unless drainage cannot be accomplished otherwise. An exception should be made to this in acute maxillary sinusitis, also in any sinusitis

with meningitis, brain-abscess or other serious complications. If the usual palliative treatments do not afford sufficient drainage from the frontal or ethmoidal sinuses, and the middle turbinate is crowding against the lateral nasal wall, the turbinate can be fractured inwards towards the septum, as described by Luc, and the obstruction relieved.

If necessary to perform a submucous resection of the septum to relieve the sinus obstruction, care should be taken to keep the mucous of the septum intact on the side of the sinusitis.

In considering operations on the frontal sinus I would take issue with those surgeons who say that they always do an extra-nasal operation. I believe an intra-nasal operation should be tried first, unless there are brain complications, necrosis of the external sinus plate or evidence of an orbital fistula.

Killian, Lothrop and Beck have devised extra-nasal methods which give the best results with the least deformity.

Of the intra-nasal operations on the frontal sinuses, Halle's new method, gives good frontal drainage without sacrificing any of the middle turbinate. This can also be performed with Good's rasp by making the same preturbinate flap as in the Halle method, instead of resecting the middle turbinate as in the Good method.

Persuing the idea of saving the turbinate bodies, the anterior and posterior ethmoids can be very easily and thoroughly exenterated by the Luc's operation, which consists of breaking away the middle turbinate from the lateral nasal wall and entering through the bulla ethmoidalis. Or using Halle's preturbinal flap, as in his frontal operation, the ethmoids are entered through the bulla.

Other methods which sacrifice part or all of the middle turbinate are usually unnecessarily radical. It is usually necessary to remove the posterior end of the middle turbinate in operation on the sphenoid sinus. Hajek's method, without being as radical as Sluder's seems to produce as good results.

It is sometimes possible when atrophic changes have taken place in the turbinates, as is often the case in chronic sphenoid sinusitis, to remove enough of the anterior wall of the sinus without sacrificing the middle turbinate.

An acute maxillary sinusitis practically never requires a radical operation, as repeat paracentesis and irrigation will effect a cure.

In chronic sinusitis it is of course necessary to perform a radical enough operation to allow a curetment of all the diseased membrane. An intranasal operation alone usually does not allow a thorough curetment of the entire sinus surface. In performing the intra-nasal I would recommend the temporary resection of the inferior turbinate, and its replacement after operation; or, if the inferior turbinate is not too large, the window into the sinus may be made below and without disturbing the turbinate.

Of the combined intra and extra-nasal operations on the maxillary sinus the Canfield, the Skillern or the Ballenger modification of the Canfield operation, preserve the inferior turbinate, yet give a good view and a chance to curet the entire surface of the maxillary.

The Caldwell-Luc, the Denker, are the next in choice, but are more radical and may be used in the more chronic cases or where there is a necrosed external or orbital plate.

This briefly is a resume of what I have seen fit to call conservative nasal surgery.

With the wonderful opportunity for constructive surgery before us, let us look well to our technic that we may not prove false to the trust imposed in us.

1601 David Whitney Bldg.

DISCUSSION.

Dr. Alexander R. McKinney, Saginaw: My earliest recollection of my surgical instruction is that surgery might be defined as what to cut and what not to cut. This is as true in nasal surgery as it is in general surgery. This definition implies, however, that the rhinologist must be sufficiently competent and adequately trained to possess the proper judgment.

If I were to make any criticism here it would be that when a man enters the special field of rhinology he is struck by surgery of the nose as the all important factor. This, I believe, is due to the short post-graduate courses purporting to fit a man for rhinology, but which stress the operative side. Operations which are to be of doubtful benefit are done usually, I believe, as a result of a distorted surgical conscience due to this surgical enthusiasm. When confronted with a case in which the surgeon is somewhat hazy as to the advisability of operation, I still believe the best way to reach a decision is for the surgeon to imagine himself in the patient's condition and in the same social circumstances, then do just as he would desire done if his own nose were involved.

In my own experience, only going back a dozen years, in rhinology, I have noted the marked change in our attitude toward the turbinates, for instance. I surely wish to stress what Dr. Pierce has said on the necessary conservation of the turbinates. An enlarged turbinate is only a symptom. Also of the necessity of doing a complete septal resection, if undertaken, as we may leave the nose in a worse condition, especially as far as a second operation is concerned.

I also would emphasize the necessity of selecting the right time for the operation, and then only after a thorough examination under cocaine and adrenalin, and proper consideration.

As I have intimated, I believe the rhinologist should not allow his surgical conscience to become dulled, and such papers as we have just heard cause us to look back upon our work with a proper perspective and take stock of our methods.

Dr. R. B. Canfield, Ann Arbor: Mr. President: I think this has been a very useful paper. In looking back upon our own mistakes and upon the mistakes of others we come to the conclusion that it is quite possible to improve the breathing function of a nose and destroy the olfactory function. By the sacrifice of useful mucous membrane as Dr. Pierce has pointed out, we can very easily destroy absolutely the olfactory function, or at least so extensively that the patient is forever uncomfortable from the olfactory point of view.

Those who have seen the sacrifice of comparatively healthy membrane of the olfactory part of the nose must have been struck by the fact that from then on the patient complains of discomfort, although he can not always say exactly where he feels uncomfortable.

The entrance of air into the upper part of the nose, especially when that part of the nose had been healthy before being operated upon, renders the patient to a degree light headed, uncomfortable, causes a certain sense of pain, and obtunds the olfactory functions very considerably.

I quite agree, I think, with the spirit of Dr. Pierce's paper. I know of no pathological condition in the sinus, except malignancy, which calls for the thorough curettage of the muco-periosteal lining. The loss of the muco-periosteal lining always induces discomfort in the patient. Instead of decreasing the amount of discharge it rather increases it by permitting more or less healthy nasal secretions to dry inside the sinuses, collect there in considerable quantity, and then to escape into the nose, giving the patient the idea that he has a great deal of discharge.

I have no doubt that Dr. Pierce follows very much the same plan that the rest of us do, to re-

move what mucous membrane he considers diseased beyond recovery, and to leave the other. Personally I prefer to leave even rather oedematous mucous membrane in the sinuses than to remove it, believing that proper drainage, and especially with the proper breathing action, the air entering the nose along in the proper direction, that the chimney action of this air entering and making its exit, draws secretions from the sinuses and establishes a tendency on the part of nature towards recovery.

I don't believe that it is possible by any method of operating upon the sinuses, to cure the patient. I believe that we establish a tendency towards recovery, and that nature does the rest, and with that in mind I am year by year becoming more conservative in my attitude towards excessive sinus surgery.

Those of us who have done radical operation such as the Killian operation and then have been forced to re-operate such cases, must be struck by the fact that while at the first operation we found what we were pleased to call diseased mucous membrane, with a lot of pus in the cavity, we found in almost all cases a perfectly healthy bony wall, and then at the second operation, when for some good reason we opened the sinus again we found a very unhealthy bony wall—especially true with the Killian operation. After a man has had a Killian operation performed, and then has gone along for a year or so and that same sinus is opened, the entire wall against which the subcutaneous tissues have fallen, and to which they have become attached is found to be red, easily bleeding, somewhat sugary, we are struck by the fact that he now has a definite disease of the bone. The question must arise as to what has caused it. It was not there at the first operation, but it was there at the second operation. It must be due, I take it, to the fact that the bone has been denuded of a protective covering. If our attention in our rhinous surgery is led towards securing the most satisfactory drainage, and our attention in our intranasal surgery is led towards establishing the respiratory function of the nose as firmly and as satisfactorily as possible, I think that nature will take on the duty of establishing a definite tendency towards recovery, which in more or less all cases will be quite successful.

Dr. Howard W. Pierce, Detroit: I have nothing special to say, Mr. President, except in regard to the question of the removal of the lining of the sinuses, which I touched on in my paper. I just want to put myself straight on that, that I do not believe in the radical removal of the mucous membrane of the sinuses, unless they show a marked degeneration.

The Journal

OF THE

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November

Editorials

CLINICAL CONGRESS OF SURGEONS.

It is certainly disturbing to one's mental complacency to attend the meetings of this clinical congress. If one were possessed of the idea that he was abreast of the latest opinions methods, if one had a personal feeling that his technic were ultra-modern, if one were satisfied that his results were equal if not better than many another fellows, Oh, if you considered that you were fully up-to-date, if such attitudes characterized the complacency with which you went to a meeting of this clinical congress you were due for a rude awakening. And, such jarring follows attendance upon other national meetings be they in nature, medical, surgical or devoted to our allied specialties. We have sometimes wondered if it would not be wise that some requirement be instituted to impel doctors to attend certain national meetings each year in order that they be permitted to continue to practice.

The Surgical Congress of North America was held in Montreal during the week of October

11th. Distant though it may have been to some, one was more than repaid by the programme that was so replete with excellent work and discussions. It was more than worth while in time and money to hear Sir Berkley Monihan of Leeds, England, discuss duodenal ulcer, foreign bodies in the lung, his wonderful J. B. Murphy Surgical Oration and his presentation address that was rendered when he presented a most beautiful Mace to the Surgeons of America from the Consulting Surgeons of the British Army. Then there was Sir Carless of London, who presented the application to civil life of the skillful surgical achievements of military surgery. His discussions were masterly in their practical deductions. Added to this were the symposiums on the acute abdomen, cancer, fractures, goitre, etc., participated in by Lund, Mayo, Matas and other nationally recognized authorities. One listened in reverence and wonderment as they imparted their latest methods, experiments and results. Such were the scientific meetings.

The clinical work at the hospitals was of intense interest and their character exemplified modern surgery. The Royal Victoria and the Montreal General hospitals provided ample room in their spacious amphitheatres as did also the Hotel Dieu and Western Hospitals. The days were filled with clinical demonstrations and operations and ward walks. In addition McGill University Medical Department kept open house and presented interesting laboratory work and specimens.

One would consume far too much space were he to enter in detailed description of this year's meeting. What we do wish to impress, however, is that he who fails to attend such national meetings sustains a personal loss that can never be retrieved. Further, he who continuously neglects attendance on such meetings automatically slides back to a complacency that is not conducive to progressive modern thought, opinion or ability.

Dr. J. B. Deaver was elected President for the ensuing year. Michigan was well represented. The place for holding the 1921 meeting will be announced later. Fourteen Michigan men were admitted as Fellows of the College of Surgeons. Montreal Surgeons proved their merit and reputation as skilled modern surgeons. We have received no reports of anyone detained at the border by Customs Officials.

REGIONAL CLINICS

An Announcement to the Profession of Michigan

As directed by the House of Delegates, President McLean appointed Drs. E. L. Eggleston, Battle Creek, W. H. Marshall, Flint, and F. C. Warnshuis as members of a Committee to devise and execute a plan for the holding of Clinical Meetings throughout the state in conjunction with our County Societies.

The Committee has held several meetings and now submits the following plan and presents, for the present, a programme of Clinicians who are available for County Society Meetings.

Object: To make available for County Society Meetings groups of competent clinicians who will present practical discussions on present day views of etiology, symptomatology, diagnosis and treatment of the more important diseases. It is felt that such demonstrations, intensified by the presentation of clinical cases, will bring by means of these clinics, to the very doors of our members practical post-graduate work that will be of material assistance to them in their practice.

Clinical Teams: The Committee selected certain members and requested them to become Team Captains. These Team Captains were assigned definite subjects and were requested to select the personnel of their teams. As a rule, a team is composed of Internist, Surgeon, Laboratory Man, Roentgenologist and Specialist. With such an organization the subjects discussed will receive a broad presentation. The Committee feels that one of the chief ends sought is to induce a policy of careful study of every case that presents itself to a physician and to point out whereby we may eliminate error in diagnosis and treatment if we are but conversant with laboratory measures and methods for determining actual conditions. In brief to apply and utilize laboratory methods in our daily work.

Team Programmes: It is planned that a team will conduct a definite Clinical Programme in each locality for which it is booked. This programme to consist of an afternoon meeting, a recess for dinner and an evening meeting. In certain instances, when it can be arranged, surgical teams will do clinical operative work in the morning.

To illustrate, let us say that the team on Fractures and Emergency Surgery is booked to appear before a County Society meeting at 2:00 p. m. of a certain day. Two hours will be devoted to a discussion of fractures, X-Ray diagnosis, reduction and application of splints. A half hour will be devoted to actual demonstrations of various splints. An hour will be devoted to presentation of cases. Recess for dinner, it being suggested that all in attendance dine together. At seven the meeting will be resumed and each member of the team will participate in a discussion of let us say, Acute Surgical Conditions of the Right Abdomen. Or again the team on Obstetrics will discuss first the Pregnant State, second, Confinement and third, Post Partum Complications. Each member of the team presenting a selected feature of each subject.

In such a way will the subjects be covered most thoroughly. The plan will become more apparent by referring to the appended list of subjects and Team Members.

How To Arrange To Secure These Teams: County Secretaries or Chairmen of Programme Committees are requested to file with the State Secretary requests for bookings. In sending such requests the following information must be sent:

- (a) For what dates do you wish arrangements made?
- (b) What teams do you apply for?
- (c) Do you desire an all day and evening session, or only an afternoon and evening session.
- (d) What railways enter your city?

Upon receipt of these requests assignments will be made as near as possible. The Committee will, by necessity, be compelled to designate the order of appearance of different teams.

However, in so far as possible the wishes of each county will be complied with. It will be at once apparent that five requests for one team in one week in scattered parts of the state can not be filled. Hence, it is necessary for the Committee to determine the order in which teams appear in your county.

Just as soon as your request is received we will advise you of the order in which the teams you designate will appear.

Again, it will be noted that two or three teams are assigned the same subject. Requests will come in for John Jone's team for a greater number of engagements than it is reasonable to ask them to fill and so John Smith's team must be substituted. The Committee reserves the right to make such a change. In each instance due notice will be given.

The Committee urges that requests be promptly made in order that our booking schedule be perfected.

Notice of Team Bookings: Each County Secretary or Programme Committee Chairman will be promptly notified of the booking assignments made to his county and the dates upon which each team will appear. Detailed instructions as to arrangements and requirements of each team will also be imparted. You will be informed as to what a Team Captain wishes for the holding of his Clinic, the character of cases desired and such other local preparation as may be necessary for the holding of a successful meeting. In every instance ample time for local preparation will be given.

Expense of Teams: It is expected that County Societies will re-imburse team members for travelling and hotel expense.

Co-Operation: The Committee feels that this plan provides a most wonderful opportunity for our County Societies to hold a series of very profitable scientific meetings that will be of inestimable value to their members. It makes available the presentation of subjects in their broadest scope and modern application. It will demonstrate the value of present day methods in diagnosis and treatment. It cannot help but increase the standard of practice in Michigan.

This plan is original in Michigan. It marks a new epoch in medical society activity. It seeks to bring to our members instruction and inspiration for better, more scientific work. It will tend to induce a greater diligence and analytical study in our professional work.

The Committee feels that it has but made a beginning. It proposes to develop this plan to the fullest possible degree. It purposes to add new teams and a wider number of subjects. This perfecting process will be brought about as rapidly as possible. Our present intent is to observe results and experiences and to be guided by the suggestions and recommendations submitted by our members. To that end do we request individual and collective co-operation from our members. We feel certain that the value and future of this plan will become at once apparent to all.

SUBJECTS AND TEAMS.

Tuberculosis.

Team 1

Dr. H. M. Rich (Capt.)	David Whitney Bldg., Detroit.....	
Dr. P. M. Hickey	32 Adams Ave. W., Detroit.....	Rocntgenologist
Dr. F. C. Kidner,	David Whitney Bldg., Detroit.....	Orthopedic Surgeon

Team 2

Tuberculosis.

Dr. J. S. Pritchard (Capt.).....	B. C. Sanitarium, Battle Creek.....	
Dr. A. H. Garvin	Detroit	Chest Work
Dr. Mark Marshall	St. Joseph San., Ann Arbor	Internist
Dr. J. G. Van Zwaluwenburg.....	Univ. Hospital, Ann Arbor.....	X-Ray
Dr. Henry Vaughan	Kresge Med. Bldg., Detroit	Public Health
Dr. Walter Vaughan	B. C. Sanitarium, Battle Creek.....	Surgeon
Dr. Gordon Dobbin	B. C. Sanitarium, Battle Creek.....	Laboratory

Team 3**Neuro-Psychiatric.**

Dr. G. T. Ineh (Capt.)	State Hospital, Kalamazoo	
Dr. W. H. Riley	B. C. Sanitarium, Battle Creek.....	Neurologist
Dr. R. E. Balch	115 W. Lovell St., Kalamazoo.....	Surgeon
Dr. E. P. Wilber	Kal. Nat. Bank Bldg, Kalamazoo....	Ear, Eye, Nose & Throat
Dr. Walter Den Bleyker.....	513 S. Burdick, Kalamazoo.....	Internist
Dr. F. C. Potter	State Hospital, Kalamazoo.....	Pathologist
Dr. C. L. Harvey	West. State Normal, Kalamazoo.....	Biology
Dr. Samuel Renshaw	West. State Normal, Kalamazoo.....	Psychology

Team 4**Gastro-Intestinal & Gall Bladder**

Dr. E. L. Eggleston (Capt.).....	B. C. Sanitarium, Battle Creek.....	Internist
Dr. Jas. T. Case	B. C. Sanitarium, Battle Creek.....	Surgeon
Dr. W. O. Upson	B. C. Sanitarium, Battle Creek.....	Roentgenologist
Dr. G. M. Dobbin	B. C. Sanitarium, Battle Creek.....	Laboratory

Team 5**Gastro-Intestinal & Gall Bladder**

Dr. J. Walter Vaughan (Capt.).....	Kresge Med. Bldg., Detroit.....	Surgeon
Dr. Plinn F. Morse	Harper Hospital, Detroit.....	Internist & Laboratory
Dr. E. R. Witwer	435 Jefferson Ave., Detroit.....	Roentgenologist
Dr. L. J. Hirschman	Kresge Med. Bldg., Detroit.....	Proctologist

Team 6**Dermatological & Syphilis.**

Dr. H. R. Varney (Capt.)	Kresge Med. Bldg., Detroit.....	
Dr. E. W. Haass	Fine Arts Bldg., Detroit.....	Internist
Dr. A. F. Jemmings	435 Jefferson Ave., Detroit.....	Internist
Dr. Plinn Morris	Harper Hospital, Detroit.....	Laboratory
Dr. E. R. Witwer	435 Jefferson Ave., Detroit.....	Laboratory
Dr. Bertram L. Jones	Ann Arbor.....	Neurologist
Dr. Guy Connor	Washington Areade, Detroit.....	Neurologist
Dr. Udo Wile	1216 S. University St. Ann Arbor....	Dermatologist
Dr. H. R. Varney	Kresge Med. Bldg., Detroit.....	Dermatologist
Dr. R. C. Jamieson	David Whitney Bldg., Detroit.....	Dermatologist
Dr. Wm. G. Wander		Dermatologist

Team 7**Gynecology.**

Dr. Ernest K. Cullen (Capt.)	David Whitney Bldg., Detroit.....	Gyneecologist
Dr. Frederick B. Buesser	David Whitney Bldg., Detroit.....	Internist
Dr. Bertram L. Jones	Ann Arbor.....	Neurologist
Dr. Robert G. Owen	33 E. High St., Detroit.....	Laboratory

Team 9**Gynecology.**

Dr. Reuben Peterson (Capt)	620 Forest Ave., Ann Arbor.....	Gyneecologist
Dr. L. H. Newburgh	Univ. Hospital, Ann Arbor.....	Internist
Dr. A. M. Barrett	State Psychopathic Hos, Ann Arbor..	Neuropsychiatrist
Dr. J. G. Van Zwaluwenburg	Univ. Hospital, Ann Arbor.....	Roentgenologist

Team 10**Proctology.**

Dr. L. J. Hirschman (Capt.)	Kresge Med. Bldg., Detroit.....	Proctologist
Dr. C. B. Lockwood	357 Woodward Ave., Detroit.....	Internist
Dr. J. E. King	32 Adams, West, Detroit.....	Roentgenologist
Dr. C. R. Meloy	Grace Hospital, Detroit.....	Pathologist

Team 11**Proctology.**

Dr. J. A. Mac Millian (Capt.)	David Whitney Bldg., Detroit.....	
Dr. A. S. DeWitt	Kresge Med. Bldg., Detroit.....	Internist
Dr. Geo. Chene	David Whitney Bldg., Detroit.....	Roentgenologist
Dr. James E. Davis	David Whitney Bldg., Detroit.....	Pathologist

Team 12**Fractures & Emergency.**

Dr. H. E. Randall (Capt.).....	P. Smith Bldg., Flint.....	Fractures
Dr. J. G. Manwaring	Dryden Bldg., Flint.....	Orthopedic results
Dr. D. L. Treat	General Motors Co. Hos., Flint.....	Emergency Surgery
Dr. W. H. Clift	P. Smith Bldg., Flint.....	X-Ray

Team 13**Orthopedics.**

Dr. Frederick C. Kidner (Capt.).....	David Whitney Bldg., Detroit.....	
Dr. H. M. Rich	David Whitney Bldg., Detroit.....	Internist
Dr. B. L. Jones	Ann Arbor.....	Neurologist
Dr. P. M. Hickey	32 Adams Ave. W., Detroit.....	X-Ray
Dr. Wm. A. Evans	32 Adams Ave. W., Detroit.....	X-Ray

Team 14**Pneumonia & Empyema.**

Dr. C. H. Johnston (Capt.)	Metz Bldg., Grand Rapids.....	
Dr. Wm. Veenboer	Metz Bldg., Grand Rapids.....	Surgeon
Dr. J. S. Brotherhood	Metz Bldg., Grand Rapids.....	Laboratory
Dr. V. M. Moore	Metz Bldg., Grand Rapids.....	Radiologist

Team 15**Endocrineology.**

Dr. T. A. Mc Graw Jr. (Capt.).....	32 Adams Ave., W., Detroit.....	Internist
Dr. H. K. Shawan	David Whitney Bldg., Detroit.....	Surgeon
Dr. G. M. Waldeck	David Whitney Bldg., Detroit.....	Ear, Eye, Nose & Throat
Dr. M. W. Clift	P. Smith Bldg., Flint.....	Roentgenologist

Team 16**Cardio-Renal Diseases.**

Dr. M. A. Mortensen (Capt.)	B. C. Sanitarium, Battle Creek.....	Internist
Dr. A. W. Crane	420 Rose St., Kalamazoo.....	Roentgenologist
Dr. L. W. Toles	Pruden Bldg., Lansing.....	Surgeon
Dr. B. N. Colver	B. C. Sanitarium, Battle Creek.....	Ear, Eye, Nose & Throat
Dr. Paul Roth	B. C. Sanitarium, Battle Creek.....	Laboratory

Team 17

Focal Infection.

Dr. Wm. Northrup (Capt.).....	Metz Bldg, Grand Rapids	
Dr. F. J. Sladen	Henry Ford Hospital, Detroit.....	Internist
Dr. Henry J. Vandenberg	Metz Bldg, Grand Rapids	Surgeon
Dr. Thomas L. Hills	Powers Theatre Bldg., G. R.....	Laboratory
Dr. Carl D. Camp	Univ. Hos., Ann Arbor	Neurologist
Dr. Ferris N. Smith	Metz Bldg., Grand Rapids.....	Eye, Ear, Nose & Throat
Dr. W. A. Evans	32 Adams Ave., W., Detroit.....	Roentgenologist
Dr. Rickert, Pathologist	Dental Col. Univ. Hos. Ann Arbor....	Dentist

SHALL WE ADVERTISE OUR PROFESSION?

To this we answer yes—but with a qualification or limitation just as you may be pleased to term it. But the question that is voiced at once is: “What are those limitations?” Just a moment before the direct answer is made.

Times are changing and we must need change with them. That which applied yesterday or yester-year no longer applies for today or for tomorrow. Unless we adapt ourselves to and conform with these impelling changes we soon will find ourselves out-distanced and trailers in the march of progress.

Advertising on the whole is a campaign of education—it may be good or bad. The art of advertising is a profession—that is educational advertising. It consists of more than so many inches of display space and a blazing of type. It entails a wide familiarity with people and localities, a knowledge of psychology, a knowing of what people lack and need, an association with and a working knowledge of labor, production, government, civic activities and, oh, a host of other things. It requires that one know how, when and where to advertise and effectively through proper mediums and with the proper “pulling,” “selling” or “educating” copy. Until one obtains an inner view of the workings of a successful advertising agency he is woefully ignorant as to what is required to be a successful “ad” writer and what is needed to produce revenue and returns from advertising space. But you again ask, “what has all this got to do with the profession entering into the advertising field?” Nothing directly but a lot indirectly and we want you to first fix in your mind that the right kind of advertising requires more than columns of space—brains are needed to create copy and produce results.

Second: We direct your attention to the use that has been made of advertising space to

educate the public and interest them in their business by a variety of national associations and committees. This copy and form of advertising is spoken of as “good-will advertising.” Just recall some of the copy you have seen, read and been influenced by: The American Tailors Association, American Railway Association, American Bankers Association, American Lumberman Association, American Brokers Association, Electric Corporation, American Utilities Corporations, and a host of other national organizations representing various trades and professions. Whenever a need presented for public education, when widespread public support and co-operation was indicated and sought these associations took recourse to and employed educational advertising space and—obtained results.

Yes, we perceive your impatience and quizzical gleam of eye expressing your doubt as to how this applies to the medical profession and wherein a similar need for advertising exists today. Well, let us see if we can outline it in the brief space at our disposal and drive home the application.

Our medical press is filled with articles and editorials upon the need of some uniform scheme or plan to protect our interests, to maintain our position and standing, to acquaint the public with the progress we are making, to enlighten them so that they may intelligently apply our deductions, our teachings and recommendations. We rant about our legislatures and restricting medical laws; we view with alarm the upspringing and active cults of Christian Science, Osteopathy, Chiropractors, New Thought and Immanuel Movements. We are aware of the ends sought by Compulsory Health propagandists. We know the fallacy of all their activity and as the days go by we perceive how they are gaining foothold and influencing the public. Still all we do is raise

our voices and shout at each other, wildly waving our hands and asking why don't we do this or that. We recognize the bad and unwholesomeness of all these outward movements and influences and know their ultimate result, still the public, the people that pass by your doorstep, your office and your hospitals are ignorant of facts, unaware of results that should be avoided and also of results that they should attain. Ignorant and unacquainted with the rich dividends they might reap, the happiness they might secure, the health, longevity and freedom from disease and suffering they might and could secure did they but know, were they but educated and shown. And all the while we employ a far round about way at a snails pace and in a spirit fitting to fifty, seventy-five years ago to enlighten them, causing a trickle of light to filter in here and there but so ineffective as far as its influence upon the whole public is concerned. We are employing the munie-bullet of Revolutionary Days whereas, we should be laying down barrages with the 75's, and Big Bertha's and Jack Johnson's of present day efficiency.

Now then do you see? If we are to secure results, forestall the propagandist of Compulsory Health Insurance, show up the faker, expose the ninty day educated D. of C," "D. of O," "D of N.P.," and other alphabet juggling impostors, we have got to enlighten the people, the legislators, Congress, the pulpit, the press, city and county officials—well, just include everybody. And, we can not succeed in doing so if we simply shout at ourselves and air our views in our own restricted publications.

How then? Why, by advertising, just as we said at the beginning. Because that is the only proven way by which it can be put across.

No, you poor simp, not by using ink to describe a doctor's skill or ability to cure pneumonia, remove a gall bladder or circumcise of "fit-inclined" kid. We mean by educational advertising copy imparting the present day knowledge of disease, its incidence, its prevention, what is needed to lower our present mortality rates and increase our allotted four score and ten years. Advertising that will educate the public as to the folly and fallacy of ascribing every diseased condition to a misplaced vertebra or "pinched nerve." Advertising education that will reveal the evils, Prussianism and socialistic principles of Compulsory Health

Insurance. Advertising that will educate the public so that when it seeks and requires reliable information, instruction and aid in all matters pertaining to health, disease prevention and relief from affliction, that it will turn to and employ the educated, trained and experienced doctor of medicine and avoid the quack, fake or "90 day" man with an alphabet tail tacked on to his name.

That's the kind of advertising we mean, nation wide, in our lay magazines and press. No, we are not crazy and we know such a plan will cost thousands of dollars to be effective and successful. But what's thousands of dollars or a million even? The fund can be secured and not out of our own pockets, although we may have to dig up a little to sell the idea. The writer, our State Society cannot accomplish it. What is needed is for every doctor, every county and state society in our United States to get behind this movement. Stop wringing your hands and shouting at each other and wondering what to do. Let's have a Council on Public Welfare that will centralize such an educational campaign. Then it will be easy to secure endowments and contributions from our philanthropists. Then, and only then, will we nullify the acts of the charlatan and selfish propagandists. Then and only then, will we thwart that which tends to threaten and limit our honest endeavors.

No, we don't quite expect everyone to accept this suggestion. Neither do we quite expect the House of Delegates of the A. M. A. at its next session to create such a council. We are, however, willing to wager that before many moons such a campaign of educational advertising will be undertaken. Why? Because it is the only way we are going to speedily attain the end sought and demanded.

Remember advertising space sold Liberty Bonds, conserved sugar, saved fuel, stopped food waste, inspired and increased production and helped win the war. That was all educational advertising. That same educational advertising will put across that which we want every Tom, Dick and Harry to know about the profession, what it is doing, what the frauds are and what is best for Tom, Dick and Harry's physical well being. That is why we started out by saying yes to the query: Shall the Profession Advertise Itself?

Note: No advertising agency stimulated or

suggested this editorial. It is the product of our own thought and observation. We solicit tolerance for attempting to cover so broad and important a subject in such short space. Much more can be subscribed in support of this plan. We are only endeavoring to start you thinking and discussing. We know the solution will be secured.

HOSPITAL STANDARDIZATION.

The chief purpose of the American College of Surgeons, since its beginning in 1913, has been the betterment of the clinical practice of surgery. Surgery is a specialty of medicine; it is also an inseparable part of the science of medicine. Better practice of surgery, therefore, means the better practice of medicine, and with this fundamental idea the College set about its work. Even matters of public health, the prevention of disease, the intelligent distribution of the benefits of medicine, medical education, and the problems of hospital administration and equipment, are factors in any comprehensive plan of action with such an aim. The work of the College in this field is called hospital standardization.

Details of the program of hospital standardization, what it is, how it developed, its meaning to the public, to the hospitals, and to the profession, and a bibliography of the subject, are given in the report of the College for 1919 (Bulletin Vol. IV, No. 4). The following pages are a report of progress for 1920.

There is an analogy between the service of the courts to the public and the service of the medical profession, which makes clear what hospital standardization is. The court protects our right to justice. The Judge, if he is worthy of his trust, is a man of integrity, of impartiality, and of intelligence. He seeks out the facts relevant in each case and, guided in some instances by a jury, finally makes his decision. The entire procedure of each case becomes, then, a public record. That record is subject to review by higher courts. The entire process is designed to establish justice. That is the importance of the analogy here—the provisions of the law against error or the miscarriage of justice.

In a similar way the medical profession is in

service to the public. Each doctor is a judge. He presides over our right to be well. If he be worthy of his trust, he is a man of integrity, of impartial devotion to his patient's welfare, and of intelligence. The requisite training of a doctor, to-day, is long and most exact. But this training is merely the pre-requisite to practice. In practice the doctor must seek out the facts relevant to each case. Upon these facts rest the diagnosis and treatment. If errors occur either in diagnosis or treatment, they are not only most difficult to review or to correct, but they seldom can be corrected. Surgery admits practically of no appeal. In this matter the law obviously has an advantage. To reduce all errors or all failures for whatsoever reasons, therefore, in the practice of medicine and of surgery to the lowest percentage is the first business of the medical profession; and through hospital standardization the profession seeks both the practical means and the speed in the realization of this aim.

Hospital standardization aims to safeguard the patient against error in diagnosis, against lax or lazy treatment, against unnecessary surgical operations or operations by unskilled surgeons; it aims to bring to every patient, however humble, the highest service known to the profession.

Backed by the common experience of practice, doctors to-day unanimously agree that if they are to create the highest service of which the profession is capable, they must at regular intervals review what they have done, what results they have accomplished, what mistakes or other failures, if any, they have made and why. They must know that the same mistakes do not occur a second time through avoidable reasons. In other words, the doctor's obligation is to grasp in a regular and orderly way the benefit of his experience and to apply the ever-increasing wisdom gained by this process to his work. Further, the doctor's debt to his profession, to himself, and to society, requires that he benefit also by the clinical experience of his colleagues. The common experience of his colleagues is his; and his experience is theirs. To use common experience rightly is to use common sense; and as to the value or need of such common sense in the practice of medicine there is no debate.

But how the doctor is to gain in a regular and orderly way the benefit of his own clinical

*From the Report of Committee on Hospital Standardization of American College of Surgeons rendered in Montreal Oct. 11, 1920.

experience and that of his colleagues? To answer that question the Minimum Standard given below, was designed.

The Minimum Standard grew gradually out of a thorough study of actual conditions in the practice of medicine. It grew out of the straight thinking of the clearest minds in medical and hospital work on this continent. It is practicable, workable, and constructive. It costs effort rather than money. It safeguards the care of every patient admitted to the hospital by insistence upon competence on the part of the doctor, by thorough study and diagnoses in writing for each case, and by a checking up, at least once each month, of the clinical service of the hospital. It fixes responsibility throughout the hospital. It calls for the "production sheets" of the hospital, but does not cause in any way violation of the confidential relationship between the doctor and his patient. It encourages and even compels research. It defines the minimum service to the patient, which, beyond all debate, is considered essential.

Above all, the Minimum Standard is designed to bring a sense of responsibility to those who have to do with a hospital that each patient admitted receives care scientifically sound. It is on this basis that the hospital may seek the confidence, good will, and support of its community; and it is through progress in this line that the medical profession may most swiftly advance to its rightful position in society.

The medical superintendent¹ of one of the leading hospitals of the continent recently said, after years of practical administration of the standard:

"The Minimum Standard is not, perhaps, so simple as it looks. But certainly it does not impose too great a burden of effort upon the doctor or upon the hospital. It calls for no undue expenditure of money. It is not impertinent, for it is based upon the sound principles of practice which the profession long ago accepted. It forces a constructive and co-operative scrutiny over all medical work in the hospital, unnecessary surgery, incompetent surgery, lax and lazy medical service, and all commercialism in medicine go down before it.

The Minimum Standard is not a theory.

1. Dr. M. T. McEachron, Vancouver General Hospital.

Wherever it is tried with sincerity, it succeeds. One result of it, too, is that it swiftly submerges personal prejudices among doctors and unites them under those bonds which have always made the profession great."

THE APPROVED LIST.

Following herewith is a list of the general hospitals of one hundred or more beds in the United States and Canada which on inspection either met the minimum standard or later during the current year reported that they had met that standard.

In presenting this list the Regents of the College are quite aware that artificial standardization is indefensible. After five years of work, however, upon the problem of better service in hospitals, the Regents believe that the standard upon which this list is based is fundamental. They are borne out in this view by the hospital administrators and hospital trustees. The list, therefore, marks in an accurate fashion the progress of the medical profession in making its own ideals come true in practice.

The hospitals named in the list are taken from a group of 692 hospitals. Two years ago, 89 out of these 692 hospitals fulfilled the minimum standard; one year ago 198 out of the 692 met the standard; at the present time 377 of the group meet the standard.

These figures are the findings of personal visits to the hospitals by staff members of the College. These men, all graduates in medicine, visited the hospitals not as spies nor as meddlers. They went rather as engineers, discovering first what the short-comings of the institutions were and then indicating how these shortcomings might best be overcome. The council meetings held at the various hospitals by these inspectors are a most important factor in the success of the entire work.

In addition to the 692 general hospitals of 100 or more beds in the United States and Canada, there are in these two countries 1,006 general hospitals of from 50 to 100 beds. These smaller hospitals will be considered in the survey of the College for 1921.

On every hand evidence exists to-day of a new and powerful interest on the part of the public in hospitals. The time is not far distant when a hospital in co-operation with the doctors who practice in it must either soundly protect the

right to be well of its patients or forfeit all claim to the confidence and good will of its community.

The following Michigan Hospitals are on the approved list:

Battle Creek Sanitarium.
 Butterworth Hospital, Grand Rapids.
 Blodgett Hospital, Grand Rapids.
 Children's Free Hospital, Detroit.
 Detroit Receiving Hospital.
 Grace Hospital, Detroit.
 Harper Hospital, Detroit.
 House of Providence, Detroit.
 Saint Joseph's Hospital, Ann Arbor.
 Saint Mary's Hospital, Detroit.
 Saint Mary's Hospital, Grand Rapids.
 University Hospital, Ann Arbor.
 U. of M. Homeopathic Hospital, Ann Arbor.
 Women's Hospital & Infants Home, Detroit.

Editorial Comments

One of the principle causes for poor end results and prolonged disability in cases of fractures of long bones is the prolonged immobilization of the joints of the involved limb. It requires experience and judgment to know when a splint can or cannot be removed. It requires mechanical skill to so immobilize that passive motion can be secured during and after the first week. One is culpable, if he permits a joint to remain in a fixed position for periods varying from two to ten weeks. Early passive motion and muscle massage are necessary and when employed will vastly better our end results in fractures.

Some doctors refer their cases of infected hands, appendical disease, lacerated tendons, perineal lacerations, benign tumors of the breast, to surgeons because they personally realize their inability to institute the proper surgical treatment. Yet when a fracture of the long bones, a Pott's or a Colles presents they have no hesitancy in undertaking treatment. The case of fractured bones requires as much if not more skill than many of our surgical procedures. Why then do we consider them so lightly?

The announcement of the number of teams for Regional Clinics contained in this issue is incomplete. The committee in a supplementary announcement will present the subjects and personnel of additional teams. County Societies are urged to make early requests in order that bookings may be arranged.

We are firm in the opinion that the plan to provide teams composed of capable men to conduct meetings largely clinical in character, for our county societies provides one of the greatest opportunities for professional advancement. We feel certain that the plan will increase the interest in our county meetings. We know that these meetings are going to make us better doctors. No one can afford to miss such a meeting in his county. The committee takes pride in what it has thus far accomplished. It also realizes that the plan must be further developed and that the machinery will present some features that will have to be changed as our experience indicates.

County officers should promptly avail themselves to make early booking requests for Clinical Teams.

November and with dropping temperature there has occurred some drop in the H. C. L. Just an indication of what the profiteering individuals have been salting away while the middleman has been footing the bills. Oh well, there is bound to be a day of reckoning. Just like our Jew friend, when a customer entered his place and asked what was the disagreeable smell in his store, he replied: "Why it's my business; it's rotten."

Occasionally we receive a weekly paper from some of our smaller cities. We, ever since our boyhood years, delight in reading them and note that the same style continues in reporting the news. One came to hand the other day and our attention was arrested by the accidental or studied intent of the professional cards of the local doctors. Two were printed and after each name was the degree of "M.D." The sole osteopath preceded his with "Dr." That was a splendid way of indicating to the local community the goat that sought to mingle with the sheep.

Benefits to be Derived from the Wayne County Medical Society.

As a rule a person gets out of a society what he puts into it. It requires little time and exertion on the part of the doctor to attend the medical meetings. For this sacrifice what is there in it for him? First of all, the contact with his fellow workers adds much to the sense of brotherhood of the profession; it serves to cement a feeling of friendliness, and a belief in the nobility of the profession. The sight and contact with the leaders of the profession are a stimulation. It is a well known fact that the best and busiest men always seem to have time for medical so-

cieties. Is it that they make the society or does the society make them? It must work both ways.

Furthermore, a united and consolidated profession possesses a reserve potential strength which can be summoned to effective exercise when need arises. It not only protects ourselves, but helps to protect the people, who look to us for their health guidance.

Aside from the foregoing reason for the existence of a medical society, there is the no less important opportunity for inter-change of professional knowledge. Poorly prepared papers poorly delivered by men of insufficient training make the meetings dull. This is added to by long drawn out discussions which could just as well be given in a few minutes. An uninteresting meeting makes a poor attendance.

It is no credit to the essayist, the discussant or the society when half the meeting slumbers.

The program committee has in store for this year, a series of bang-up papers and it is hoped that a good attendance will be present at every meeting, and that there will be many short, snappy discussions.—From Bulletin of Wayne County Medical Society.

Every now and then we meet for the first time a fellow member of our State and frequently we are greeted by—"Why I thought you were a gray haired man with whiskers." We naturally wonder how they "get that way" in their opinion. If our editorial efforts reflect sage and age we are thinking that probably it's time to call for a transfusion of infant's blood, because personally we only feel like 25 and no signs of senility. So with this announcement let the next one beware how he greets us for we promise to take him to greater task than we did the last one.

Correspondence

Detroit, Mich., Sept. 29, 1920.

Michigan State Medical Society,

Powers Theatre Bldg.,

Grand Rapids, Mich.

Gentlemen:—

We have frequent necessity for mailing reprints outside of Detroit, and have difficulty in getting mailing lists covering the different cities and counties. Would it not be advisable, and of benefit to the members of the Michigan State Medical Society, to put the members of our Wayne County Medical Society in a position to mail reprints to such various groups as seem desirable? May I ask, if it is not possible for the Journal to fur-

nish our Society with a copy of the mailing list at this time. If you will send the list to me personally, I shall be glad to see that it is properly cared for, and turned over to the Business Manager of our Society, or if you prefer it could be mailed to the Society direct.

Thanking you for your co-operation in this service, I beg to remain

Cordially yours,

E. G. Martin.

Reply.

October 2, 1920.

Doctor E. G. Martin,
David Whitney Bldg.,
Detroit, Mich.

My Dear Doctor Martin:—

Answering your letter of Sept. 29th.

The Directory of the American Medical Association as found in the library of the Wayne County Medical Building contains under Michigan in capital letters the names and addresses of all Michigan doctors who are members of the County and State Society, together with their office and residence addresses. In addition you will find a list of officers of each County Society, hospitals, state committees, state boards, schools, etc.

This is a reliable list and imparts the information which you seek.

Our mailing list is on an addressograph with each name separate, consequently we cannot print the mailing list on one sheet and send it to you, much as we would like to.

I am sure you will receive the assistance sought by referring to this directory. Because of frequent similar inquiries I am going to publish your letter and this reply in our next issue of the Journal.

Cordially yours,
Secretary-Editor.

Mt. Pleasant, Mich., Sept. 24, 1920.

Editor,

Journal Michigan State Medical Society:

I know that others have had the same experience that I have and that it cannot be said that I am the only kicker. If the others have met the same treatment I have they are entitled to a complaint. When my student days in Ann Arbor were ended, and I went out to practice, I believed that there was one place I could go for help, and that was Ann Arbor. Experience has taught me that I was mistaken. The Faculty at Ann Arbor has forgotten that I was ever a student there, and as I look backward over years of experience I can truthfully say that I have received but very little assistance from my Alma Mater. During the past year I wondered if I might not

be mistaken in my opinion, and that things were now better. During the year I have sent patients to the University Clinic but in every case I have been ignored and a lack of confidence in my professional ability created in the mind of my patient by the handling of the case in Ann Arbor. I sent Mrs. Darnell to the clinic about Feb., 1920, an interesting case of infection, she was operated upon and returned home, but no report of the case was sent me and Mrs. Darnell has never been in my office since.

Charles Egberts' little girl was sent in for a mastoid operation, was operated upon and returned home in a few days, but was obliged to return for dressing twice a week. The father was told that country doctors did not know enough to dress a mastoid, and the operator was afraid we did not have any sterile gauze in Mt. Pleasant.

Mrs. K. was sent in for diagnosis and advice as to treatment. She was examined, a diagnosis made, and the trouble prescribed for, but I did not know anything about it until two weeks afterward when she came to me to get the prescription filled, the drug stores not being able to fill it. I could mention others but the ones mentioned are sufficient.

I have always believed, and still believe, that the tax payers of the State maintain the medical college and hospital for the benefit of all the people, but regardless of the size of the hospital at Ann Arbor, the faculty cannot see all the sick people in the State and by their refusal to counsel with the attending physicians of the patients who go to Ann Arbor for treatment, the value of the great institution is limited to a few people, whereas if the faculty would return the patients to the attending physician to carry out the treatment, giving the doctor the benefit of the clinic's advice as well as the patient, the value of the institution would be carried home to all the people instead of a very few as it now is. If we have physicians who do not keep up, Ann Arbor must carry the blame for not giving the Doctor the chance he is entitled to. There is much more that might be said about the practice of medicine in Michigan but I think this will give my opinion of the question under discussion.

Faternally,

Dr. Charles D. Pullen.

Ann Arbor, October 12, 1920.

Dr. F. C. Warnshuis,

Powers Theater Building,

Grand Rapids, Michigan.

Dear Dr. Warnshuis:

Your letter to Dr. Vaughan together with the inclosure of Dr. Pullen's letter to The Journal

has been referred to me for investigation and reply. I have gone over the records carefully and I am driven to the conclusion that Dr. Pullen has an imaginary grievance or in other words is "wearing a chip on his shoulder."

Some of his statements are based on fact; some of them are absolutely without foundation and further the evidence shows that Dr. Pullen knows them to be untrue. The first patient to whom Dr. Pullen refers whose name incidentally is used for publication in violation of his professional obligations to the patient, I find was treated in the Homeopathic Hospital and has never been a patient in this hospital. Inasmuch as Dr. Pullen is a graduate of the Homeopathic Medical School his complaint that his Alma Mater has forgotten that he ever was a student may be explained by the fact that his attitude is one which would tend to cause lapse of memory on their part, because there are some things you know that we all would like to forget.

The second patient to which Dr. Pullen refers was one not referred by him and consequently there was no special reason why he should have been advised of the patient's condition. The same is true of a patient not mentioned in his communication, but regarding whose treatment he complained in a letter to Dr. Cabot who, by the way, in a personal interview with Dr. Pullen assured him that we were doing everything possible to keep the family physician advised of the condition of his patients.

There is nothing further that I need say regarding Dr. Pullen's communication except to state that it is libelous and that it should not be printed. We are always glad to receive constructive criticism. We know that our system of advising the doctors regarding their patients is not perfect but with the facilities we have and with the tremendous handicaps imposed upon us, we are doing the best we can and we are willing to go to any reasonable length to correct mistakes which you must realize will occur in treating seventeen thousand patients in a year.

It has been my policy ever since I became director of the University Hospital not only to treat physicians of the State with consideration but further to place the University Hospital and its facilities at their disposal. In this policy I have always had the unanimous support of the hospital staff and medical faculty. The successful outcome of the monthly practitioners' clinics is an evidence of our attitude toward the physicians. The fact that there has been provision made in the hospital budget to pay the expense

of a series of outside clinics might be cited as further evidence of good faith.

Briefly, to honest critics we shall be obligated to explain our shortcomings; to a certain class of others, explanations are of no avail because in their desire to find grievances against the hospital regard for the truth is altogether too incidental and unimportant.

Very truly yours,

C. G. Parnall.

Mt. Pleasant, Oct. 8, 1920.

Dr. F. C. Warnshuis,
Grand Rapids, Mich.

Dear Doctor:

Since I wrote you, Wm. Huber another patient of mine was returned to me from the Homeopathic hospital without a word of advice, through him I learned what he thought the diagnosis was and what they said the remedy was. The medical service rendered to him helped him, and as I fell down on the case it would have helped me to render better service if I could have had a report on the case.

You are at liberty to publish the name of this patient if you desire.

Yours Fraternally,

Dr. Chas. D. Pullen.

New York, Oct. 19, 1920.

Dr. F. C. Warnshuis,
Grand Rapids, Michigan.

Dear Doctor:

As a member of the Washtenaw County Society and the Michigan State Association I am applying for membership in the American Medical Association as a Fellow. Will you please endorse the enclosed blank and return it to me, so that I may pay up the fees and become a Fellow in good standing?

In closing allow me to congratulate you upon the splendid showing that the Journal of the M. S. M. S. is making. It is way above the average of the other state journals we see these days.

Sincerely,

L. Mason Lyons, M.D.

Deaths

DR. WALTER R. HICKS.

One of the best known and best beloved physicians in Michigan, Dr. Walter R. Hicks of Menominee, died suddenly on Sept. 26th of acute dilatation of the heart.

Dr. Hicks was born in 1865, a graduate of Michigan University in 1887 (followed by a year at Bellevue Hospital). He later took post graduate surgical courses in New York, Rochester and other surgical centers.

He was an active member of the American Medical Association, and of the Michigan State, Menominee County, Upper Peninsula and Fox River Valley Medical Societies. He was past president of the three latter organizations.

Dr. Walter Hicks was a physician and surgeon of unusual ability and a physician in much more than the practice of his profession, to which he gave a lifelong devotion of duty performed and service given with every ounce of his energy and without stint or sparing. He was a physician



Dr. Walter R. Hicks, Deceased.

in the friendship relations which make life worth while, and the record will never be known of how far afield from the professional beaten path he went because he loved his fellow men.

Unselfish, courageous, hopeful and sympathetic, he carried with him every day the science of service with the science of medicine, and no better tribute can be paid to his life work, so suddenly cut down in its height of usefulness, than to express to his wife and children the potent fact that Menominee, in every phase and part of its life, feels today stricken in his loss and richer for his life.

An epitaph of love and tenderness is written in the hearts of every one within the broad field of his life work. As citizen, physician, friend and patriot he did with his might what his hand

found to do, while in intimate circle of the home he was all that a husband and father can be to those he loves.

Dr. Karl A. Kranzler, Saginaw, died Oct. 12.

The Doctor was born in Bavaria, April 6, 1858. He studied in Munich University and after practicing a short time in his native land came to America and Saginaw.

He leaves a widow and one son Ernest of Detroit.

Dr. Mabel Bucher King died at her home in Flint after an illness of three weeks of heart trouble.

Dr. King was born in Brimfield, Ohio, in 1838 and graduated from Mt. Holyoke, Mass. College in 1864. She married Dr. Robert King in 1867. Later she took up the study of medicine in the University of Michigan, graduating in 1876. After the death of her husband she continued in active practice until three weeks previous to her death.

She leaves two daughters, Miss Minnie B. and Miss Helen B. a member of the faculty of the Saginaw high school.

State News Notes

COLLECTIONS.

Physicians Bills and Hospital Accounts collected anywhere in Michigan. H. C. VanAken, Lawyer, 309 Post Building, Battle Creek, Michigan. Reference any Bank in Battle Creek.

4,000 Vienna Doctors Strike for Higher Fees.

Vienna, Sept. 30—Four thousand doctors of Vienna who have been treating patients under the auspices of sick benefit associations have gone on strike. They are refusing to make visits except for the regular fees of their private practice.

The All-America Conference on Venereal Diseases is the first of a series of regional conferences suggested by the International Health Conference held at Cannes under the auspices of the League of Red Cross Societies. It is fitting that the first conference concern itself with the control of venereal diseases, for it is now generally recognized that these diseases constitute perhaps the largest and most important single factor now impairing public health.

It is the purpose of the administrative committee to bring together recognized authorities in their respective fields and especially to make

possible a comparison and evaluation of the methods now being employed in various parts of the world for the control of venereal diseases. As far as possible the presentation of set papers will be avoided, it being felt that full and free discussion will be far more helpful to those who attend.

The program will be so arranged that it will be possible for any delegate to attend all the meetings. In general, the morning will be devoted to a discussion by the Conference Delegates of the scientific basis underlying the campaign for the control of venereal disease, the afternoon to a discussion by the delegates of administrative methods, while the evening will be given over to general meetings where the various findings of the Conference Delegates will be presented for consideration by the entire membership of the Conference.

The Conference will be preceded by special addresses on topics allied to venereal disease control, in some of the churches of Washington on Sunday evening, December 5th.

The opening general session of the Conference, to be held Monday evening, December 6, will be preceded by registration of all members. At this opening session, addresses will be made by the president of the Conference and by other speakers who will deal with the broader outlines of the subject.

Following this the Conference Delegates will take up, next morning, the work of preparing material to be presented to the entire membership at appropriate times.

The program here drawn up is presented in outline only, but it will serve to show the general scope of the Conference and the kind of discussions planned. These discussions will be in the hands of some of the most eminent authorities on the control of venereal diseases.

A. Conference of Delegates (Morning Session). The Scientific Basis of Control Measures

Tuesday, Dec. 7. Present status and recent progress in medical investigation.

Wednesday, Dec. 8. Education as a means of controlling venereal diseases.

Thursday, Dec. 9. Law enforcement and protective social measures with individuals.

Friday, Dec. 10. Social influences in the control of venereal diseases.

Saturday, Dec. 11. Final session devoted to the formulation of reports.

Some idea of the importance of the conference may be gained from the following list of questions which have been proposed for discussion. The Conference Delegates will review past experiences and existing knowledge relating to the

causes, carriers, treatment and prevention of venereal diseases, and prepare useful general statements covering answers to such questions as are here selected for illustration. Specifically the conference will endeavor to adopt recommendations relating to a practicable three year program for each of the North and South American countries participating, and to suggest plans for putting such program into effect.

Problems Relating to Medical Investigations.

1. To what extent should the Wassermann test be relied upon as evidence of syphilis in the absence of clinical symptoms?
2. Is neosalvarsan as effective as salvarsan in the treatment of syphilis?
3. Is arsphenamine equalled in the treatment of syphilis by other arsenicals now being used?
4. What is vulvo-vaginitis in infants? How does it arise? How should the condition be dealt with?
5. Are the common methods of treating gonorrhea in the female effective?
6. Is it possible to immunize against syphilis or gonorrhea?
7. Is it possible to determine statistically with a tolerable approximation to accuracy the effect of syphilis and gonorrhea on the general death rate?
8. Is it feasible to secure accurate certification of venereal diseases on death certificates?
9. Has the internal administration of mercury a proper place in the treatment of syphilis?
10. Should acute infectious cases of venereal diseases be admitted to general hospitals? If so, what special facilities, if any, do they require?
11. Is gonorrhea curable? Is it commonly a self-limited disease? What criteria should be used in determining whether a cure has been affected?
12. How should the Wassermann test be used in dealing with syphilis?

Problems Relating to Education as a Means of Controlling Venereal Diseases.

1. Is our present scientific knowledge concerning venereal diseases sufficiently broad and firm to permit the development of effective campaign measures? If not, in what directions should it be developed?
2. Is the medical profession as whole sufficiently educated and trained to render the most effective aid in combating venereal diseases? If not, in what is this education or training defective and what steps should be taken to remedy the situation?
3. Are the medical schools devoting sufficient attention to the social and economic aspects of disease, especially in their relation to venereal diseases?
4. What role, if any, can the elementary schools play in the educational campaign for the control of venereal diseases? The secondary schools? The colleges?
5. At what age and how should a knowledge of venereal diseases be imparted to the younger generation?

6. What method of instructing persons about to marry can be devised that will be effective and not subject to abuse?
7. How much emphasis should be placed on venereal diseases in sex education in secondary schools?
8. How may moving pictures best be utilized in combating venereal diseases?
9. What can be done to secure greater assistance from newspapers in educating the public regarding venereal diseases?
10. Can we learn educational methods from the quack?

Problems Relating to Law Enforcement and Protective Social Measures with Individuals.

1. Has the general abolition of the segregated districts in the United States given satisfactory results from an epidemiological point of view?
2. Has there been an increase in promiscuity in the United States since the end of the war? If so, is this due to the repression of commercial prostitution, or to other causes?
3. Are the reformatory methods used with prostitutes effective?
4. Should fines ever be imposed on convicted prostitutes?
5. Is there an adequate protective program available by means of which communities can safeguard their wayward girls? If so, what is it?
6. Is there any discrimination against one sex in the enforcement of law concerning prostitution in the United States?
7. Is the movement to make "age of consent" laws apply to both sexes sound and successful?
8. Should fornication be made a crime?
9. What is the after-history of the "charity girl?" Does she eventually adjust herself to social standards?
10. To what extent, on the average, are prostitutes subnormal and otherwise deviates, mentally and physically?

Problems Relating to Social Influences in the Control of Venereal Disease.

1. Does economic pressure play an important part in leading women to become prostitutes?
2. Have recent advances in psychology thrown any light on the alleged "sex necessity?"
3. Can any relation be demonstrated between recreation facilities and delinquency?
4. Is the part of the population infected with venereal diseases inferior mentally, socially and economically to the uninfected part?
5. What becomes of the prostitutes who disappear from the "profession?"
6. Can the public dance hall be so regulated as to eliminate it as a contributing factor in the spread of venereal diseases? If so, how?
7. What influences lead a boy to become a patron of prostitution?
8. How much is the spread of venereal disease checked by educational propaganda using fear as its basis of appeal?
9. Do climatic influences play a part in determining the amount of delinquency and venereal disease infection in a community?
10. On what basis, from a public health point of view, should the state attempt to govern the issuance of marriage licenses?

**B. Conference of Delegates (Afternoon Sessions).
Administrative Measures in the Control of
Venereal Disease.**

Tuesday, Dec. 7, to and including Friday, Dec. 10.

Administrative Measures in the United States,
Federal, State and Local.

Administrative Measures in Canada.

Dominion, Provincial and Local.

Administrative Measures in Latin-American Coun-
tries.

Administrative Measures in other countries.

Relation of official to extra-governmental agencies.

It will be noted that these discussions are arranged on a geographic basis, a plan by which it is believed the largest amount of practical application can be derived from the results of the Conference. Among the many administrative questions which public officials are frequently asked to answer are the following:

**Problems Relating to Administrative Control Meas-
ures.**

1. Has the prophylactic packet a place in the public campaign against venereal diseases?
2. Is notification of venereal diseases really effective? What measures should be employed to secure the notification of venereal diseases?
3. What are the relative advantages or disadvantages of having venereal disease clinics separate from other public clinics?
4. Should treatment at public venereal disease clinics be limited to those unable to pay? If not, should such clinics charge a fee for treatment?
5. Should states or municipalities supply arsphenamine free (or at cost) for the treatment of syphilis in public hospitals or clinics? For the use of private physicians?
6. What is the role of voluntary agencies in the field of administrative control of venereal diseases?
7. Are clinics continuing treatment of the patients long enough to be of any value?
8. Should health officers be allowed to make arrests for prostitution?
9. Do police officers tend to use the sanitary code as a substitute for the criminal code? If so, is this desirable?
10. Are useful results achieved by placarding premises quarantined for syphilis or gonorrhea?

C. General Sessions (Evenings).

**Authoritative Summaries of the Work in Venereal
Disease Control.**

Tuesday, Dec. 7. Terrible Toll of the Great Red
Plague. Speaker to be announced.

Wednesday, Dec. 8. Juvenile delinquency and public
health. Speaker to be announced.

Thursday, Dec. 9. Let there be Light! How educa-
tional measures can effectively combat the Great
Red Plague. Speaker to be announced.

Friday, Dec. 10. A practicable program for combating
venereal diseases. Speaker to be announced.

Entertainments

It is quite impossible to give definite information so far in advance regarding the plans for the entertainment of delegates and members of

the Conference. Assurance can be given, however, that no effort will be spared to make attendance at the Conference a pleasure to be remembered.

Hotels

The Committee will be very glad to assist delegates in securing suitable hotel accommodations. Depending on the character of the hotel and of the location and character of the room desired the rates for these range from \$3.00 to \$6.00 per day, European plan. It is suggested that delegates have the Executive Secretary make suitable reservations, and that they therefore state exactly how much they wish to pay for accommodations, and the time of their expected arrival.

All correspondence should be addressed to
Executive Secretary

All-America Conference on Venereal Diseases
411 18th Street, N. W.
Washington, D. C.

Among the new appointees in the Medical School and on the staff of the University Hospital are Dr. Frank M. Wilson, formerly Associate in Medicine in Washington University, St. Louis, Missouri, Associate Professor of Internal Medicine. Dr. Wilson's best known work has been in cardiac diseases.

Dr. Frederick A. Collier, Assistant Professor of Surgery in the division of General Surgery. Dr. Collier was engaged in private practice in Los Angeles, California before coming to Ann Arbor and previous to his entrance in private practice he was Resident Surgeon at Massachusetts General Hospital. Dr. Max M. Peet, Assistant Professor of Surgery, devoting his attention chiefly to neurological surgery. Dr. Leroy Abbott, Assistant Professor of Surgery, head of the division of orthopedic surgery. Dr. Abbott was in Liverpool for a year with Sir Robert Jones and in Edinburgh with Sir Harold Stiles for eighteen months. Dr. John Alexander, Instructor in Surgery, formerly with Dr. C. H. Frazier, University Hospital, University of Pennsylvania. Dr. Alexander is coming here to do special research work in surgery, especially with reference to surgery of the chest.

Dr. John Sherrick has been appointed Assistant Professor of Obstetrics and Gynecology. Dr. C. G. Parnall, Director of the University Hospital, has been appointed Professor of Administrative Medicine in the Medical School.

The Detroit Academy of Medicine held its 51st. annual meeting on October 12th at the Detroit Athletic Club. The following officers

were elected: President, Dr. J. W. Vaughan; Vice-President, Dr. H. M. Rich; Secretary-Treasurer, Dr. H. E. Safford, and Director, Dr. Walter P. Manton. Preceding the meeting the retiring President, Dr. Ray Connor, gave a dinner. Twenty-six Active Fellows were present.

Humor and pathos, jest and seriousness, contended at the Flint Country club Friday evening, when nearly 200 of Flint's leading citizens gathered to express their appreciation of the long and devoted service rendered this community by Dr. C. B. Burr, retiring founder of Oak Grove Sanitarium.

The speeches, all short and to the point, covered the whole range of the doctor's career and the various facts of his many-sided character. Loving friends touched with delightful humor upon his eccentricities of temperament; loyal admirers described his solid achievements in science and his ministering care for the mentally unbalanced; old friends voiced their admiration of the man as a public servant, churchman, citizen and patriot. Between talks the proceedings were enlivened by bursts of song and ebullitions of wit from the jester's table, where foregathered a company of tuneful minstrels apt in parody and primed with jokes.

While not lacking in praise of Dr. Burr's many virtues, the honored guests did not have everything quite his own way. There were playful references to his silk hat of other days, his pet lizards, his combativeness as manifested in *The Journal's* Public Pulse column. But the predominating note was one of sincere enthusiasm for the man whose long life and sterling abilities have been devoted to unselfish labors in a most trying field of professional endeavor, and who found time and energy outside his profession to become a leader and guide in public matters.

Dr. M. W. Clift, acting as toastmaster, introduced the following speakers who responded briefly; J. D. Dort, C. S. Mott, L. L. Wright, Dr. C. H. O'Neil, Dr. E. A. Chritian, superintendent of the Eastern Michigan Insane Asylum, John J. Carton, Arthur Pound, George W. Cook and Francis H. Rankin, W. W. Mountain and F. A. Aldrich.

At the end of the program, Dr. Burr responded, repaying in kind, with incisive raillery, and thanking with modesty and warmth his many friends for this cheering expression of their goodwill at this time.

Doctor Harold Wilson, President of the Wayne County Medical Society, has appointed the fol-

lowing men, chairmen of the various committees: Doctor R. E. Mercer, Library Committee; Doctor E. H. Sichler, House Committee; Doctor Harlow Drake, Ethics Committee; Doctor Neal Hoskins, Entertainment Committee; Doctor B. C. Lockwood, Publication Committee; Doctor Fred C. Cole, Membership Committee; Doctor J. A. MacMillan, Patriotic Committee; Doctor H. W. Yates, Cancer Committee; Doctor Walter W. Manton, Program Committee; Doctor Guy L. Kiefer, Public Health Committee; Doctor E. W. Haass, Endowment Committee; Doctor C. W. Hitchcock, Necrology Committee; Doctor J. B. Kennedy, Legislative Committee; and Doctor Rolland Parmeter, Nurses' Committee.

The shelves of the library of the Wayne County Medical Society are practically filled. In the annual report of the Library Committee, it was recommended that two additional stories be added and that the two upper ones be used as stack rooms and the present stack room be used for the receiving and sorting of incoming books and for the use of those writing articles or looking up references. This recommendation was referred to the Board of Trustees for their consideration and action.

Dr. David J. Levy has begun his duties as chief of the consulting pediatric staff of Herman Kiefer Hospital. Associated with him are Dr. E. W. May, Dr. Thomas S. Davies and Dr. Roland M. Athay. These men, who will have entire charge of the children's cases, will also attend the infants in the maternity ward. Of 605 beds at the hospital, two-thirds are occupied by children under 14 years of age. They are suffering from tuberculosis, scarlet fever, diphtheria and other contagious diseases. Dr. J. B. Seeley is the new chief of the resident staff.

The following Michigan surgeons were admitted to Fellowship in the American College of Surgeons at the Convocation held in Montreal October 16th:

William J. Anderson, Iron Mountain; James D. Bruce, Saginaw; Andrew R. Hackett, Detroit; Preston M. Hickey, Detroit; Edward M. Libby, Iron River; George I. Naylor, Ann Arbor; Wilson Randolph, Detroit; J. Milton Robb, Detroit; Joseph E. Scallon, Hancock; Ward F. Seeley, Detroit; George A. Seybold, Jackson; William G. Winter, Holland.

The Regents of the University have raised the price for care of patients at the University hospitals here. Hereafter all state patients occu-

pying ward beds in the hospitals will pay \$2.75 a day and all state patients occupying private rooms will be charged \$3.50 a day. The patients from out of the state will have to pay \$3.25 a day in the ward rooms and \$4.50 a day in private rooms.

Doctor Arthur D. Holmes has been appointed Treasurer of the Wayne County Medical Society by the Board of Trustees. Doctor Holmes was President of the Wayne County Medical Society when the money was raised and the present club house was bought. He was one of the most active and most successful presidents this society has ever had.

The address of the Retiring President, Doctor George E. McKean, was delivered before the Wayne County Medical Society on September 20, on *The Life and Work of Sir William Osler*. His descriptions were wonderfully well done and we hope in the near future to be able to publish these remarks in the Journal.

Mrs. Schenck has presented to the Wayne County Medical Society the gynecological library of her husband, the late Doctor B. R. Schenck. It is a very welcome addition containing as it does quite a number of well chosen books and journals.

The annual report of the Treasurer of the Wayne County Medical Society showed that its property, including land, building and equipment, was worth nearly \$100,000. At the present time there is a mortgage of \$4,500 on the property.

Doctor W. R. Chittick has been appointed by Mayor Couzens to fill the vacancy on the Detroit City Planning Commission caused by the death of Doctor J. Henry Carstens. This appointment was made September 21, 1920.

The American Hospital Association, composed of prominent physicians and nurses in the United

States and Canada, held its annual meeting October 5, 6, 7, 1920, in Montreal. Doctor Joseph B. Howland, superintendent of the Peter Brigham Hospital of Boston, is the President of this body.

Dr. Worth Ross, director of the infant welfare department of the Detroit Board of Health attended the eleventh annual conference of the American Child Hygiene Association in St. Louis, October, 1920.

Dr. R. Earle Smith, recently resident physician of the New York Skin and Cancer Hospital, has become associated with Doctors Warnshuis and Portmann of Grand Rapids. The doctor will limit his practice to dermatology and syphilis.

Doctors Ray Connor and Walter Parker attended the annual meeting of the American Academy of Ophthalmology and Oto-Laryngology at Kansas City, October 14, 15 and 16, 1920.

The regular meeting of the Michigan State Board of Registration in Medicine was held in Lansing, October 13, 1920. Eight members of the board were present.

Doctor Douglas Donald of Detroit was united in marriage to Miss Edna Dunstan at Tilton, N. H., on October 30, 1920.

Dr. Willard Quennell has resumed his duties as Superintendent of the Highland Park General Hospital.

Dr. A. W. Newitt has resigned as Health Officer of Birmingham.

Dr. J. Talso of Hancock has located in Detroit.

Dr. L. J. Boyd of Addison has been appointed an assistant to Dr. Hinesdale of the U. of M.

Dr. W. F. Lewis has re-located in Luther.

COUNTY SOCIETY NEWS

It is the Editor's desire to have this department of the Journal contain the report of every meeting that is held by a Local Society. Secretaries are urged to send in these reports promptly

GENESEE COUNTY

The Genesee County Medical Society met for noon luncheon on Wednesday, Sept. 22, President Randall in the chair. Three new members

were elected to membership. Dr. A. M. Hume of Owosso was present and in a neat speech conveyed the greetings from his county. The meeting was devoted to a clinic on Mental Hygiene

and the material supplied by Dr. Pratt of Flint who is conducting a very useful clinic at the Health Center. Probate Judge Graves, Editor Kingsley of the Flint Saturday Night, and several county officers were guests of honor as men who should be interested in our problems. Dr. C. B. Burr, in his own inimitable manner introduced the speaker of the day, Dr. E. A. Christian of Pontiac. Cases of the following disorders were presented: Dementia Precox of the Paranoid Type, Cretinoid Idiot with persistent Thy-mus, Cretin, Psychasthenia, and Cerebral Syphilis. The cases were beautifully presented, not only from the medical and psychological sides, but from the sociological as well. The speaker predicted that it would not be long before such clinics as we are conducting here would be regularly held in every county in the state.

W. H. Marshall, Secretary.

The Genesee County Medical Society met on Sept. 28th, President Randall presiding. The principal speaker of the evening was Dr. V. C. Vaughan of Ann Arbor. After a brief retrospect of the lessons in preventive medicine learned in the great war, he dealt with some of the problems concerning the future of medicine. He did not think we had too many doctors but intimated that their skill could be used to better advantage than under present conditions. We needed more hospitals and we must educate the public to their necessity. We need health centers in every county with complete laboratory facilities for early and correct diagnosis. In order to do our best work and to maintain our standing as a profession, we must work with the people and for the people.

W. H. Marshall, Secretary.

The Genesee County Medical Society met at the Dryden Cafe on Wednesday, Oct. 6th. President Randall presiding. The Board of Health offered the society suitable quarters for a medical library and agreed to look after the clerical work. Steps will be taken to get this in operation in the near future. Dr. R. B. Hoobler of Detroit gave a splendid address on "Convulsions in Infancy and Childhood." He especially dwelt on the importance of recognizing Spasmophilia which he declared caused 90 per cent. of all convulsions and in his experience was not recognized in about 50 per cent. of the cases.

W. H. Marshall, Secretary.

The Genesee County Medical Society held its annual business meeting on Wednesday, Oct. 20, at the Dryden Cafe. The total membership of

the society is 127. Thirty-four new members were added in the past year and four lost by death. Twenty-three meetings in all were held, with a record attendance. Twenty-one outside speakers and thirteen local speakers contributed to the programs. The subjects discussed covered almost every specialty in medicine and surgery. The following officers were elected:

President—Dr. J. Walter Orr.

Vice-President—Dr. A. S. Wheelock

Secretary—Dr. W. H. Marshall.

Treasurer—Dr. E. G. Dimond.

Medico-Legal Officer—Dr. F. B. Miner.

Directors—Drs. T. S. Conover, B. E. Burnell, Noah Bates, C. H. O'Neil, H. E. Randall.

Delegates to State Society—Drs J. C. Benson, Carl Moll, W. H. Marshall.

Alternate Delegates—Drs. F. E. Reeder, W. H. Winchester, J. G. R. Manwaring.

W. H. Marshall, Secretary.

GRATIOT-ISABELLA-CLARE COUNTY

The September meeting of the Gratiot-Isabella-Clare County Medical Society was held at Dr. Lamb's resident in Alma, Sept. 23. The dentists were invited to meet with us. For a program we had Dr. A. M. Crance and Dr. Ray R. Reed, D.D.S. from the Jones Clinic of Bay City. Dr. Reed's subject was focal infections of the mouth in relation to systemic diseases, with the emphasis on the necessity of a complete physical examination. He illustrated his subject with lantern slides, and case histories. Dr. Crance's subject was "The Clinical Value of Systematic History Taking, in Gall-bladder Disease—Report of Cases with Corroborative Surgical Findings." This paper was discussed by Drs. Brainerd, Brondstetter, Reed, Foust and others. The attendance was good and every one felt they had a profitable afternoon.

E. M. Highfield, Secretary.

The October meeting of the Gratiot-Isabella-Clare County Medical Society was held at Brainerd Hospital, Thursday Oct. 14.

Dr. H. R. Varney of Detroit conducted a skin clinic. We had a good variety of cases from Sarcoma of the jaw to stone bruise of the foot, from Lichen planes to Dermatitis herpetiformis. The Doctor talked for over two hours, explaining each case in detail, giving every one an opportunity to ask questions. The Dermatologist has a little advantage over the other specialist in giving a clinic in that his subject is on the surface. The best clinics we have had have been

on this subject, and Doctor Varney's was most interesting.

E. M. Highfield, Secretary.

WAYNE COUNTY

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Book Reviews

OPERATIVE GYNECOLOGY. H. S. Crossen, M.D., Associate in Gynecology, Washington University Medical School. C. V. Mosby Co., St. Louis, Mo. Price \$10.00.

Five years ago we were privileged to review the first edition of this text. It is again a privilege to comment upon this second edition that is brought up to present viewpoints and contains additional material as also some seventy new illustrations.

The work is purely surgical in its text. As such it maintains with increased prestige a foremost position in surgical literature. It is indeed of so much value that one refers to its pages frequently with a foregone knowledge that he is going to find dependable detailed information upon the subject that is referred to. The completeness of the text is ever satisfying and practical.

We again commend this book most highly to all our readers. It will be found ever useful and a prized reference text.

PHYSIOLOGY AND BIO-CHEMISTRY IN MODERN MEDICINE. J. J. R. McLeod, M.B., Professor of Physiology, University of Toronto. Third Edition. C. V. Mosby Co., St. Louis, Mo. Price \$10.00

Incorporating the changes and later principles that have become recognized in recent years this splendid text is presented by the author and publisher. As such it is to our notion the most helpful, practical and all around serviceable text discussing the physiological and bio-chemical features of practice and treatment in disease. We recommend it to every progressive doctor with the assurance that it will be a satisfying addition to your reference library.

*Miscellany***HEALTH INSURANCE.**

It is interesting to note that the German papers are commenting on the attitude of the Medical Profession in America toward Compulsory Health Insurance.

The Medical Clinic of Berlin Comments on the matter editorially and apparently admits that the system in vogue in Germany has practically reduced to State servitude a former free and independent profession. It is further remarked that negotiations for the renewal of contracts were abruptly broken off when fees of twelve marks

for house visits and eight marks for office calls were suggested. At the present depreciated value of the mark, this represents about twenty-five and seventeen cents respectively in American money, and laying aside all question of the present condition of foreign exchange and the purchasing power of the mark, the real significance of this report lies in the fact that private practice in Germany has become almost a thing of the past, and that the State has virtually assumed control of the practice of medicine. This is precisely the situation that is foreseen and dreaded by physicians in this country, who realize that control by the State of the conditions of practice, means complete loss of independent action. Once the power of assigning a physician's field of activity is placed in the hands of the State and the subsequent steps to compel socialization are easy. How this problem is to be met by American Physicians is by no means clear. One attempt at solution may be recognized in the decision of the New York Police Department to collect funds to both equip and endow a hospital in Brooklyn for policemen and their dependants, a group estimated at some 60,000 persons. The plan suggested calls for a fund of \$5,000,000 of which approximately a half shall be used for endowment and maintenance. No announcement has yet been made as to how the institution shall be manned, nor what the approximate cost to the individual for treatment is likely to be. The idea of voluntary co-operation, which lies at the bottom of this plan, and which could be developed by utilizing the already salaried surgeons of the Police Department, thereby centralizing their work and giving them added efficiency and broader opportunity is worth consideration, as a plan which might be expanded to cover groups of citizens whose incomes are at present inadequate to command the better sort of medical care but whose importance to the community makes it essential that it should be placed within their reach. The scheme of voluntary co-operation is free from many of the drawbacks inherent in plans that are initiated and controlled by the State, and it may be that a comprehensive plan for voluntary enrollment of groups of citizens under proper financial conditions could be so arranged as to bring about a readjustment of the present field of medical practice without interfering with the opportunities of the physician for normal growth that is inherent in State Socialism.

The objection of thinking physicians to the plans so far brought forward arises from their

certain knowledge of two unavoidable results—the fact that the beneficiaries would not receive the improved medical care that is promised and that physicians themselves would tend to sink into mediocrity.

H. G. W.

PROGRAM FOR MENTAL HYGIENE IN THE PUBLIC SCHOOLS.*

E. Stanley Abbot, M.D.

The duties of the psychologist in the clinic are (a) to make or supervise mental tests; (b) to interpret the results of the tests in terms of (1) general age level or development status, (2) of special abilities and deficiencies, and (3) of special individual intellectual or educational needs; and (c) to advise as to special methods and subjects of instruction in individual cases. In the bureau his duties are (a) to make investigations or direct them, and (b) to make recommendations as to further investigations or applications of the findings, etc.

The duties of the psychiatrist are (a) to determine the causes of the backwardness, defect, nervousness, or other exceptional conditions in the individual child; (b) to advise measures to correct or better these conditions or to obviate them or their causes; (c) to direct the carrying out of these measures so far as they are medical and social and not educational—i. e., concerned with the courses of study of the child; and (d) to aid in investigations.

The duties of the psychiatric social worker are (a) to investigate the home and other environmental conditions of the exceptional child; (b) to try, under the direction of the psychiatrist, to correct harmful and to establish helpful conditions in the home and other environments having detrimental influences; (c) to keep constantly in touch during school years with the child and its home; (d) to inform other social agencies of the needs of the child after school years in order that continuous oversight and guidance may be given so long as needed throughout the individual's life; and (e) to act as recorder in mental clinics, when called upon to do so.

The duties of the visiting teacher are (a) to establish co-operative relations between home and school; (b) to help the child in home study through suitable assistance to the child and through developing right attitudes in the parents; and (c) to help parents in their relations to the child and to the school.

*Mental Hygiene, April, 1920.

Adrenalin in Medicine

3—Treatment of Shock and Collapse

THE therapeutic importance of Adrenalin in shock and collapse is suggested by their most obvious and constant phenomenon—a loss in blood pressure.

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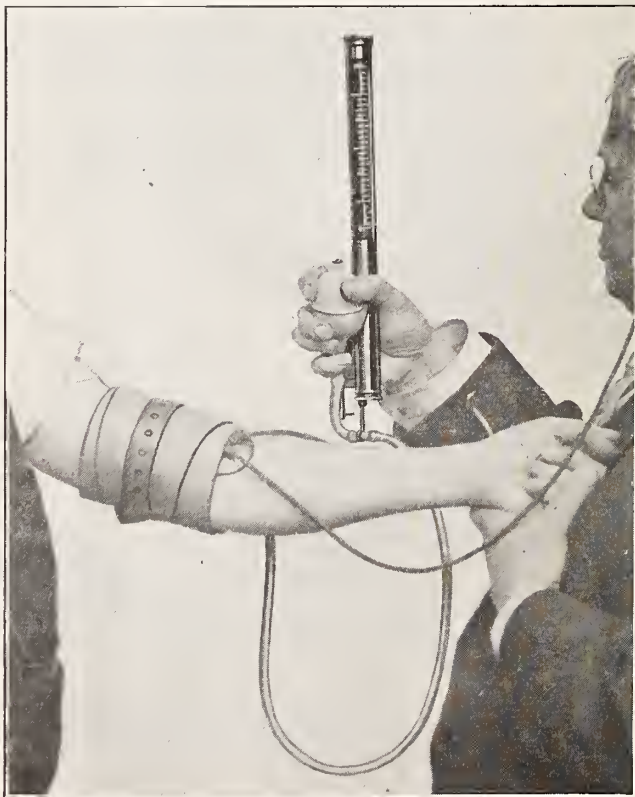
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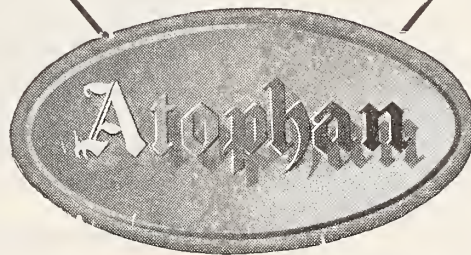
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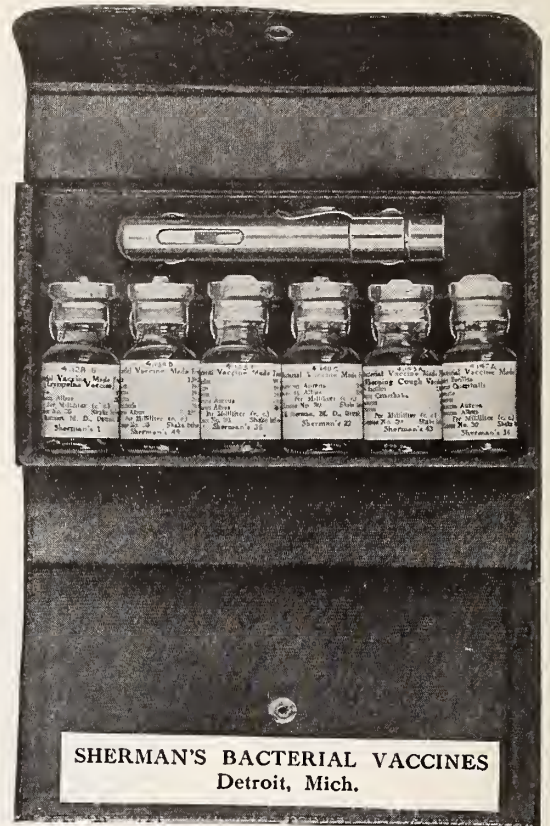
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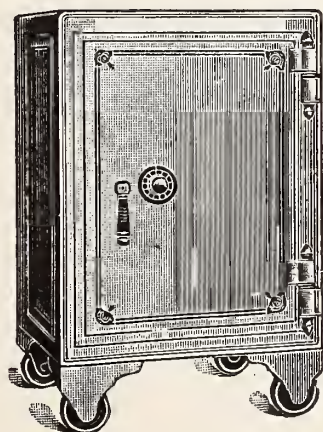
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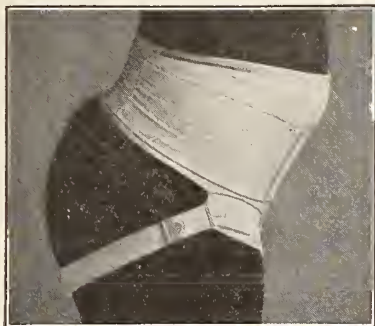
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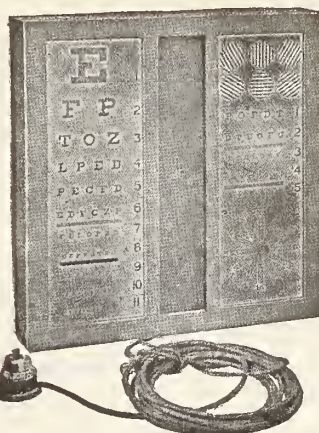
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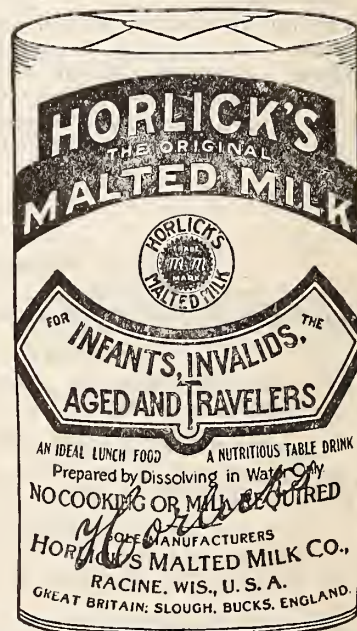
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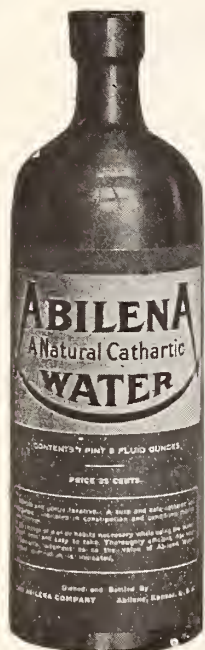
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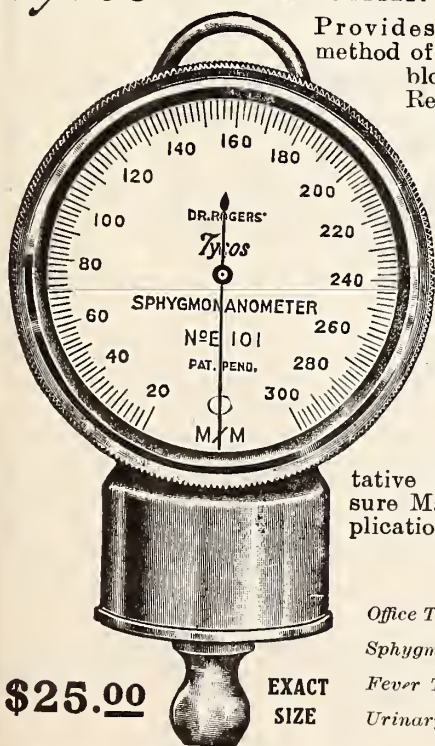
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THE ETIOLOGY OF BRIGHT'S DISEASE*

L. H. NEWBURGH, M.D.

ANN ARBOR, MICH.

Acute nephritis is the result of the deleterious effect upon the parenchyma of the kidney of the poisonous products of infection. The streptococcus is usually the offending organism. In children a great many cases follow immediately upon acute tonsillitis.

In adults the nephritis of bacterial origin is generally of insidious onset and for this reason may be properly labelled subacute. Many of these cases appear to be closely related to streptococcal focal infection. But it is exceedingly difficult to obtain entirely satisfactory proof in support of this idea. It is certainly true that removal of an infected focus rarely effects a cure of the nephritis.

Chronic nephritis is of two types. A minority of the cases are the end stage of an antecedent acute or subacute nephritis of bacterial origin. But chronic nephritis is so intimately associated with arteriosclerosis that the two conditions must be studied together in order to obtain a satisfactory understanding of either. In order to adequately account for the prevalence of chronic nephritis, it must be shown that one or more substances or practices in common use, when indulged in to excess, are capable of causing renal and arterial sclerosis. A great many persons habitually eat two or three times the amount of protein required by them. May not the abuse of protein be a common source of chronic renal and arterial disease. In order to obtain data capable of affording an answer to this question, the writer has studied the effect upon the kidneys and arteries of rabbits, of long continued high protein diets. Both chronic nephritis and advanced arteriosclerosis has been repeatedly produced in this way. Since the rabbit, even though an herbivorous animal, normally eats amounts of protein quite compar-

able to that eaten by man, it appears to be in accord with our present state of knowledge to believe that abuse of protein by man, when long continued, will eventually produce a contracted kidney. How often this factor is in itself the cause of human chronic nephritis and how often it prepares the soil for other agencies which in the absence of such preparation, would do little harm, is entirely unknown.

THE PATHOLOGIC-PHYSIOLOGY OF NEPHRITIS.*

ARTHUR R. ELLIOTT, M.D.

CHICAGO, ILL.

The term "pathologic physiology" is ordinarily employed to indicate the study of disordered function or of function in diseased tissues. Under the title of this paper we are consequently concerned with the effect upon the function of the kidney which is exerted by the lesions of nephritis. Properly speaking this discussion should be prefaced by a description of the physiology of the kidney. Data for any exact account of the physiologic activities of the organ are unfortunately not as yet available.

The earlier attempts at the study of renal function were undertaken with the idea that thereby light might be thrown upon the degree to which the various anatomical systems (glomerular and tubular) were involved and so afford the means for anatomical-functional classification. It must be obvious that in so complex a glandular structure as the kidney, a pathologic process is not likely to confine itself to one of the histologic structures or systems of the organ to the exclusion of adjacent portions. With even the simplest type of clinical nephritis there exists enough general structural involvement to make conclusions as to special function disorder hazardous and consequently the attempt at functional classification of nephritis cases has been abandoned.

For clinical purposes many refer to renal function as if it were a unit. If this were so

*Abstract of a paper read at the Annual Meeting of the Michigan State Medical Society, Kalamazoo, May 27, 1920.

*Read at Annual Meeting, M.S.M.S., Kalamazoo, May, 1920. Section on General Medicine.

one single test capable of measuring the elimination power of the organs would suffice for the estimation of kidney activity. Unfortunately the matter is not so simple. We know enough about kidney physiology to be very sure of the fact that the different subdivisions of the renal secreting structures have widely varying physiologic functions and are affected to an unequal degree by different nephrolytic substances. For example it is a matter of routine observation that the diseased kidney may retain water and salt or urea or phosphates or any of the normal urinary constituents and allow the remainder to pass through freely. These facts impose upon the investigator the obligation to employ such various methods of testing as are available, each test being interpreted according to its own established significance.

The complexity of modern renal function testing has undoubtedly led to duplication and multiplicity. Some of the methods originally advocated have been gradually abandoned, for instance, the Lactose and the Iodide of Potassium tests are now generally regarded as not measuring what they were supposed to measure, namely, tubular and glomerular activity respectively. The process of selection and simplification of technic is still going on and we may look forward to a standardization of method in the future. The work of earlier observers in this field was handicapped by the fact that each investigator used some single method of testing failing usually to check up his results by comparing them with what might be secured by applying to the same patients several methods of study. Later investigators have pursued a more liberal policy. The interpretation of the significance of findings secured is unfortunately still largely a matter of personal impression and experiences. It will require a large accumulation of observations to enunciate any principle of interpretation or put the data in any logical sequence.

Chronic Nephritis is a disease of very prolonged clinical course and years not months are required in the study of the average case. In consequence it is not reasonable to expect that we can secure any very exact knowledge of function anomalies and variations without many and repeated observations covering long periods of time and extensive series of cases. Furthermore, it would appear necessary to study the kidney histology after death in conjunction with observed function irregularities before a satisfactory verdict can be rendered on the relation between function and structure. Many and valuable as have been the advantages gained by function studies of the kidney, it may prove

to be that they have concentrated attention too exclusively on the kidney, thereby crowding out a broader interest in the chemical balance as a whole. We see occasional examples which appear to indicate that the kidney is not the only, or perhaps, the most important factor involved in Nephritis. For example, there are occasional patients who continue to enjoy fair health yet notwithstanding have kidney function values which are ordinarily considered incompatible with life. Bearing on the same point are the cases now and then observed where fatal uremia develops with good phthalein excretion and blood nitrogen accumulation in no degree alarming. One may suspect that abnormalities of function revealed by testing have been interpreted too exclusively as the result of kidney pathology alone without allowance for the fact that the excretory power of the kidney is influenced by many other factors besides the condition of the organ itself.

It is significant that in the earlier years of renal function study enthusiasm was expressed in a literal interpretation of results whereas now it is apparent that a greater caution is manifest in making deductions from any group of tests applied at one time. This is perhaps due to a fact now clearly apparent that the same rules do not apply for different types of cases, nor indeed are they invariably applicable within any single group. For example, it is now understood that increase in blood urea nitrogen has in acute Nephritis a different significance from the same figure in a patient with high blood pressure and chronic renal change; the patient with chronic Nephritis and edema may show reasonably good phthalein excretion and still have a very serious prognosis, while the cardio-renal patient with edema and with the same poor phthalein output may enjoy a good renal prognosis, the outlook on life depending on his cardiac capabilities. Interpretation of results is beset with difficulties and we get individual variations from anticipated results that are difficult to account for. Many of these anomalies depend probably on the operation of extra-renal factors, such as myocardial weakness, associated organic defects and intercurrent infections, blood conditions, etc. These factors exert a positive influence on the results of renal function testing so that we should not be rigid in our interpretations or be too strict in regarding abnormality of function as an affair of the kidney alone.

As regards the merits of various methods of estimating kidney function, opinion has pretty well settled on the phenolsulphonephthalein test, the renal test diet and quantitating the

waste nitrogen bodies in the blood. For the general practitioner there are two tests that offer special practical advantages. They are the so-called phthalein test and the renal test diet. The phthalein test is available for the purpose of furnishing information regarding the total function of the kidneys. The renal test diet as worked out by Mosenthal enables us to determine the efficiency of the kidneys in the excretion of water, salt and nitrogen and their ability to concentrate and dilute the urine. Quantitating the nitrogen extractives in the blood enables us to accurately gauge the power of the kidneys to deplete the blood of tissue waste.

Before proceeding with the discussion of the relative merits of these various methods, I propose to submit certain observations on patients from the medical service of St. Luke's hospital, Chicago, the work being done by Dr. J. Lyle Williams of the Pathologic Laboratory. I have selected fifty-two serial observations. In every case the phthalein index is shown along with totals for blood urea and total non-protein nitrogen. The normal value for the phthalein test was considered to be anything over 50% in two hours and ten minutes. For blood urea from 12 to 15 mgms per 100 cc of blood was fixed as average normal, for total non-protein nitrogen 25 to 30 mgms, for uric acid 2 to 3 mgms and for Creatinin 1 to 1.5 mgms per 100 cc of blood. The general averages for the cases composing the series were phthalein 30.83%, blood urea mgms 48.79 per 100 cc blood and total non-protein nitrogen 70.72 mgms. The average blood pressure formula for the series was S.195, D.113 mms. The cases included are without exception only such as are considered as having a renal moiety. They were either patients having clinical Nephritis or cardiovascular-renal disease with high blood pressure. With this material serving as a basis for illustration, let us consider what practical deductions may be drawn as to the value of the methods employed. First, with respect to the phenolsulphophthalein test. The claim of Rowntree and Geraghty who originated this method of renal function testing,¹ was that the amount of phthalein excreted varies as a general rule in rough ratio with the extent of renal damage. In fatal uremia only traces or none at all of the dye appear in the urine for the two hour interval while in mild and moderate grades of Nephritis the amount recovered may be normal or nearly so. Agnew (Agnew, J. Howard Arch Int. Med., March 1914, Pa 485) undertook studies to determine what relation, if any exist-

ed between phthalein output and non-protein nitrogen of the blood. He concludes that in general nitrogen accumulation occurs only when the excretion of phthalein falls below 40% in two hours. This is in keeping with the observations of Folin Denis and Seymour.² In a general way these claims appear to be borne out by the results of my series, the average phthalein excretion being 30.84% with blood urea and non-protein nitrogen averaging rather more than twice normal figures. Of course, these averages should not be taken too literally, because a fair percentage of the cases were of the cardio-renal type with good phthalein excretion and no notable nitrogen accumulation; other cases of the series were advanced chronic Nephritis with profound renal insufficiency and these would have the effect of giving average values a false significance. When we come to analyze the material we are confronted with the following figures: Twenty-two observations yielded a phthalein index over 40%. For this group the blood urea averaged 21.12 mgms and total non-protein nitrogen 38.87 mgms. These figures would appear to indicate that with phthalein above the Agnew safety line of 40%, no significant nitrogen accumulation occurs. Ten of the observations reported in this series yielded phthalein values of from 20 to 40%. For this group the blood urea average was 30.85 mgms and total non-protein nitrogen 51.54 mgms. These results would appear to indicate that with a decline below 40% in the return of phthalein in the urine, blood nitrogen accumulation of positive significance occurs. There were three cases in the series showing phthalein excretory index of from ten to twenty per cent. The average blood urea for this group was 41.7 mgms and total non-protein nitrogen 66.5 mgms. Five cases yielded phthalein excretions between a positive trace and ten per cent. Blood urea values mounted in this group to 68.53 mgms with non-protein nitrogen average of 93.5 mgms. Eleven observations yielded either a faint trace of phthalein or none at all. We find in this last group enormous nitrogen accumulation blood urea values averaging 114.75 mgms and total non-protein nitrogen 140.90 mgms. If the foregoing figures possess any value they support the claim of Rowntree and Geraghty that phthalein excretion stands in rough ratio to the degree of renal excretory damage and in inverse ratio to the degree of blood nitrogen accumulation.

The great drawback attaching to the phthalein method of estimating kidney permeability lies in the difficulty of correctly interpreting

1. Rowntree L. G. and Geraghty, J. T., Jour. Pharmacol. and Exper. Therap., 1910, 1, 579; *ibid* 1911, 2, 393; Arch Int. Med., March, 1912, P. 284.

2. Arch. Int. Med., Feb., 1914, P. 241.

results. As a single method of testing it leaves much to be desired, not only because the test shows the functioning power of the kidney for the test period of two hours only, yielding no information as to accumulated lack of function, but also because it is not by any means certain that the rate of elimination of a foreign dye substance serves always as a sign and symbol of the efficiency of the kidneys in excreting metabolism waste bodies. In the small series here reviewed the parallel is not always satisfactory. For example, in one instance a phthalein index of 67% existed with total blood nitrogen of 42.28 mgms. In another instance, we note 63% phthalein although blood urea was 30 mgms and non-protein nitrogen 49.5 mgms. In still another case the phthalein excretion was 55% while blood urea stood 35 mgms and non-protein nitrogen 55.4 mgms. Fewer inconsistencies exist at the other end of the scale and yet they do occur as shown by the occurrence of a phthalein excretory index of 8% in a man of 58 with clinical Nephritis retinal hemorrhages and a blood pressure formula of 185-130, although blood urea was but 20.5 mgms and total non-protein nitrogen 34.2 mgms. It is difficult to explain observations like the following; a chronic nephritic with hemorrhagic retinitis and without evidence of circulatory insufficiency on April 27th gave a phthalein index of 35%. On the same day the blood urea was 41.8 mgms, total non-protein nitrogen 62.2 mgms. and Creatinine 2.27 mgms. He was put on a strict diet to clear the blood of waste accumulation. On May 10th the phthalein index had fallen to 27%, although renal elimination had reduced the blood urea to 26 mgms. and non-protein nitrogen to 46.62 mgms. I presume it is possible for kidney efficiency to fall, although waste accumulation undergoes reduction at the same time, provided the diet is strict enough. The general rule is that as strain is taken off the kidney by physical rest and diet regulation, the phthalein excretion improves. The effect of strain upon this test is revealed by the rapid decline in test results where strain is placed on a pathologic kidney. The failure of the phthalein test to give us any information available for either diagnostic or prognostic purposes in mild and moderate grades of Nephritis detracts greatly from its value in all but severe cases, especially as these approach the terminal stage. Even findings indicating grave insufficiency should not be accepted until extra-renal factors, such as cardiac weakness have been excluded and not even then, unless the result is judged in conjunction with general clinical study of the case,

and especially in connection with the determination of blood nitrogen.

Estimations undertaken to determine the degree of accumulation of nitrogen waste products furnishes us with the most accurate information we may secure of excretory activity in a large class of chronic nephritis, the so-called "nitrogen-retention" type. Studies of this nature are particularly to be desired for by no other means are we able to determine the degree of accumulation of waste products, an accumulation that may vary from almost normal to enormous increase amounting to many times normal in uremia. The earlier blood studies in nephritis were concerned mainly with demonstrating the excess of non-protein nitrogen without regard for particular nitrogen extractives, such as urea, uric acid or creatinin. Later observations have taken into account the percentage of blood urea and there appears to be a disposition to substitute blood urea estimations for total non-protein nitrogen on the assumption that blood urea values are more sensitive to influence from renal factors. Mosenthal claims that in lesser degrees of kidney disturbance there is an increase in urea before non-protein nitrogen is above the normal. Computing the normal blood urea average as one-half the non-protein nitrogen, we have found our observations furnish support to this claim. Meyers and his co-workers (J. A. M. A. Vol. 67 P 929) point out that in comparing the concentration of the various nitrogen bodies in the blood and urine it was observed that the kidney was able to concentrate creatinin 100 times, urea 80 times, and uric acid only 30 times. This would apparently indicate that normally creatinin is the most and uric acid the least easily excreted with urea standing in an intermediate position. If this is true it would appear logical to expect that the excretion of uric acid would be the first to become impaired, next would be urea and last creatinin.

According to these views, uric acid retention should constitute one of the early signs of nephritis, while an appreciable piling up of creatinin should indicate a grave impairment in the functional capacity of the kidneys and therefore possess grave prognostic import. These authors claim that their studies show that high uric acid is found in many early cases with urea and creatinin at the time frequently normal. Upham and Higley³ undertook a series of studies to determine how far uric acid findings might be utilized for the early diagnosis of nephritis. They submit that while high blood uric acid is a common symptom in early neph-

3. Arch. Int. Med., Vol. 24, P. 557.

ritis, it is by no means a specific one. Its availability for an early accurate diagnosis of the disease is therefore materially limited. In our series of cases there are included nine cases in which the blood uric acid was quantitated along with other forms of blood nitrogen. The average for these nine cases was rather high, 4.85 mgms. Although above normal figures, this average is below the average increase in the same cases for urea which was 49.58 mgms. and for total non-protein nitrogen which was 74.3 mgms. Certain instances ran a high uric acid with very little increase in other nitrogen bodies and these would appear to support the claim of Chase and Meyers. Certain other instances, however, offset this impression. We find for instance, in one patient a uric acid excretion of 3.7 mgms. along with a phthalein index of 6%, blood urea of 68.88 mgms., non-protein nitrogen of 92 mgms. and creatinin 7.85 mgms. Another instance of disproportionately low uric acid is one in which there was found uric acid only 5.65 mgms. with a phthalein index of 0.5% urea 142.67 mgms. total non-protein nitrogen 185.6 mgms. and creatinin 9.96 mgms. Certain control observations on blood uric acid which we carried out on patients without nephritis yielded in some instances increased blood values for uric acid. It is too early yet to admit without reservation the claim of Meyers and collaborators that uric acid increase in the blood possesses diagnostic value for nephritis.

In addition to serving as a sensitive and reliable index of kidney excreting efficiency, the estimation of waste nitrogen products in the blood possesses a special prognostic significance. The tendency to uremia may usually be measured by the level of nitrogen accumulation. The typical termination of nitrogen retention nephritis is by uremia provided extra-renal factors cardiac cerebral or infective do not close the scene. Time will not permit of a discussion of the various types of uremia or the factors concerned therein. Not all cases of uremia have nitrogen accumulation or low phthalein index, and no claim is made so far as I know that retained nitrogen is the cause of uremia. There is general agreement however that considerable prognostic value can be attached to high nitrogen accumulation, especially if accompanied by low phthalein output and fixation of specific gravity, since they indicate beyond question that renal function is seriously damaged, that there is constant danger of uremia and that long tenure of life cannot be expected. Total nitrogen values of 80 to 100 mgms or more may be regarded as of grave significance. All of the cases in the present reported series where the

phthalein index fell to a trace or zero averaged high total nitrogen, figure being 140.91 mgms. All of these patients have died except one. This patient is living nine months after the date on which phthalein failed to be excreted and total non-protein nitrogen passed the 100 mgms mark.

The search to find reliable criteria for prognosis leads us to the claim of Meyers and Killian⁴ that the accumulation of blood creatinin beyond a certain point marks the progression of nephritis to the terminal stage. These authors noted in their studies on nitrogen accumulation that the creatinin in the blood was appreciably increased only after considerable retention of urea had already taken place and the nephritis was far advanced. They point out that theoretically the amount of creatinin should be a safer index of kidney permeability than urea because creatinin is entirely endogenous in origin and its formation and elimination normally very constant, whereas urea is normally largely exogenous in origin and its formation consequently subject to greater fluctuations. As a matter of fact this claim appears borne out by observation. Meyers and Killian found that of 85 cases having a blood creatinin content of 5 mgms. or over, 80 terminated fatally. They claim to have found creatinin determination superior in prognosis to the phthalein test, because thereby changes in the patients condition as the case nears its termination are clearly shown, while the phthalein test after a certain point in nephritis is continuously negative. The number of creatinin observations included in the series reported herewith is not sufficiently large to carry much weight, but so far as they go they furnish support for the claim of Meyers and Killian. Five of the cases in which creatinin determination was made yielded 5 mgms. or over. Without exception the phthalein index was reduced in these cases to a mere trace or zero and non-protein nitrogen was over 100 mgms. Four of the five cases have terminated fatally.

Chronic nephritis is a disease which is notorious for its clinical vagaries. It is perhaps not surprising that we meet with glaring inconsistencies in the clinical application of the data secured by the various methods of function estimation. Cases that appear very grave on general clinical ground are often found astonishingly free from indications of renal function failure and conversely cases that appear on safe ground when judged by purely clinical criteria yield evidence of advanced function impairment when tested out. It is surprising how long cer-

4. Am. Jour. Med. Sc., Vol. 158, P. 674.

tain cases of chronic nephritis may survive after nitrogen accumulation has attained high figures and phthalein excretion is reduced to a mere trace or become suppressed entirely. O'Hare has reported a number of such instances. No absolute prognosis as to duration of life appears possible on functional findings alone, because we do not know how low renal function may fall and yet be sufficient to maintain life provided the diet and hygiene of the patient are properly adjusted.

In the foregoing discussion brief mention has been made of the renal test diet of Mosenthal. This valuable method of observation should not be passed over without further consideration. As the power to eliminate solids becomes seriously impaired in chronic nephritis, we find the ability of the kidneys to secrete a urine of normal specific gravity is lost so that eventually the diseased kidney cannot even on a dry diet excrete urine with a density, above about 1013. After the ability to concentrate the urine is lost, the kidney may still preserve its normal power of diluting the urine so that after ingestion of large quantities of distilled water, the specific gravity may fall to a low point, 1003 or less. Eventually however, with progressing renal damage even this capacity of varying the urinary composition disappears and the kidney secretes only a urine of low fixed density, 1010 to 1013. This behavior of the kidney in nephritis has been utilized as a means of functional observation, the credit for this work going mainly to Mosenthal who has established a standard method of procedure. Mosenthal pointed out that a very considerable amount of information may be obtained from observation of urinary volume and specific gravity in nephritis patients when put on a definite diet containing a fixed quantity of fluids. This diet test is known as the "renal test day." The individual with normally functioning kidneys is able to excrete at night a urine of high concentration, the so-called "urina sanguinis" of former times but in nephritis the specific gravity remains at a relatively low fixed point with a very deficient concentration of chlorids and nitrogen. The importance and diagnostic value of this fact has not yet been fully appreciated. A normal observation with the renal test diet reveals a maximum specific gravity of 1018 or over, varying 9 points or more from highest to lowest during the test period. The night urine is small in amount (400 cc or less) and of high specific gravity, 1018 or over. A lowering of the maximum specific gravity, fixation of specific gravity and nocturnal polyuria are the signs indicating

a diminished renal function. The chlorides nitrogen and other constituents may be determined in the urine and compared with the intake and thereby valuable information secured as to the ability of the kidneys to excrete these substances. However, the simple procedure of measuring the volume of urine and determining the specific gravity of the night urine and two hour divided day urine and charting them in comparison with intake yields sufficient data to give an essential idea of renal function.

This test would have wide currency in clinical work were its value better appreciated, and the simple essentials of its application better understood. It is not necessary that any standard list of foods either as to quality or quantity be adhered to. The ordinary food available in any household may be employed. The precautions in carrying out the test that are absolutely essential are that a close estimation be kept of all fluid ingested, that all urine should be collected punctually every two hours during the day, that no solid food or fluid of any kind be taken between meals and especial care must be observed that nothing is eaten or drunk during the night and that the night specimen is completed separately before breakfast is touched. Other things being equal and extra-renal factors so far as possible excluded the points developed by the test that will indicate renal insufficiency are the following: 1, markedly fixed and low specific gravity. 2, night urine showing increase in volume over normal, lowered specific gravity and low concentration of nitrogen. Cases displaying this entire group of reactions are of course advanced cases of Nephritis. During the earlier progress of the disease, it may be that all that is apparent is a tendency to polyuria and elevation of the quantity of night urine. The first signs are usually demonstrated in the night urine. Positive reactions to this method of testing are not confined to nephritis alone but may appear in other renal conditions such as pyelo-nephritis, polycystic kidney and extra-renal states, such as anaemia, diabetes insipidus, prostatism, etc. The test is inapplicable in acute Nephritis and in states of myocardial decompensation and during the accumulation and elimination of edema. Our experience with the test has been comparatively limited, sufficient, however, to venture the opinion that its usefulness is best shown in middle stage cases of Nephritis with high blood pressure and good cardiac compensation. Studies with this test over a single twenty-four hour period are inconclusive, unless they yield evidence of very positive character for too many factors may influence water excretion over so

short a period. Two observations of a high specific gravity are worth much more than a dozen never going over 1010. When conclusively demonstrated an inability to concentrate indicates considerable damage to the kidney. Even positive evidence of this sort alone is of less significance, than when it fits into and confirms the rest of the clinical picture.

It is apparent that in this discussion but one phase only of the disturbed physiology of the kidneys has been considered. There are other problems more or less important which have not been touched owing to lack of time. Among these are the salt metabolism of the nephritic and edema, hyperglycemia in Nephritis and the relation of acidosis to renal insufficiency.

30 North Michigan Boulevard.

THERAPEUTICS OF NEPHRITIS.*

WILBER E. POST, M.D.
CHICAGO, ILL.

Therapeutics in nephritis is obviously a broad subject and in the discussion this afternoon either marked brevity or attention only to certain features will be required—perhaps both. For the most part there will be only a restatement of that which has been long known. Little is new.

In the beginning permit me to make a few general statements:

1. A rational therapy in nephritis is based upon pathological factors concerned in the given case. By this is meant that a careful analysis of each case of nephritis will reveal one or more of the fundamental pathological processes as the cause of the nephritis and the remedy depends upon the nature of those pathological processes. These pathological processes are due to:

1. Infection
2. Intoxication
3. Vascular disease
4. Cardiac failure
5. Impairment of respiratory function of the blood.

According as one or the other of these is the chief causative factor, our therapeutic management will be governed.

2. Much of our concern in nephritis is in the disease processes in other parts of the body than in the kidneys—such are the so-called uremic symptoms of disease in the brain, edema as a manifestation of disease in subcutaneous tissue, muscle, serous membrane, lungs; impair-

ment of vision or pain in the eyes as indications of disease in the eye; dyspnea due to impairment of the myocardium; asthma, dyspnea or cough due to interference with the function of the lungs. With these and other conditions associated with nephritis may be our chief concern. Far too often have we been taught to say these conditions are *due to nephritis* while in greater probability they are due to the same pathological agents or processes that cause the disease of the kidney. The numerous investigations of the last few years leave us astonished at the scarcity of scientifically demonstrable evidence of disease of the kidney itself—albumin and casts in the urine, and in case of extensive destruction of both kidneys, inanition, weakness and death. Functional tests of the kidney, as such, are unsatisfactory.

3. Therapy in nephritis has been in the past altogether too much concerned with the attempt to bring about the vicarious elimination of the poisonous products of metabolism which the diseased kidneys are alleged to be retaining in the body as a dirty sieve in a sewer might dam back the sewage. If therapy is directed toward overcoming the pathological processes that produce the impairment of metabolism, that therapy may have a more rational basis and more satisfactory results.

If then we start with this viewpoint and see that following exposure to cold and an acute infection of the tonsils or upper air passages, there appears generalized edema and albumin and casts in the urine, we find it simpler to understand and more consistent with experimental evidence if we consider that the generalized edema is the result of the chilling and infection upon the tissues of the body in general and not the result of retention of poisons, water and salt by diseased kidneys. In fact, we do see cases in whom the chilling and infection and resulting edema occur without the kidney disease and we see the kidney disease without the edema. Experimentally injury of the kidney alone never brings about the edema, nor uremia.

Such cases represent the group of parenchymatous nephritis in which generalized edema is a common accompaniment, and in which the albumin and casts and blood and renal epithelium in the urine may be large or small in amount or number. Do we find in the blood plasma increased urea and other non-proteid nitrogen, increased chlorides, diminished alkaline reserve, diminished water output in the urine, diminished salt in the urine, low Ambard coefficient, low McLean index, low phenolsulphonephthalein output? Sometimes we do and

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sometimes we do not. But why do we find them increased or decreased? Is it because the diseased kidney is plugging the exit of metabolic products from the body? Or is it because the tissue cells and fluids of the body have been so altered by infection or intoxication or chilling that the tissues and fluids retain water and salt in excess? And is it because metabolism in the tissues is rendered so imperfect that abnormal products of metabolism are formed and retained in excess? It is probable that both viewpoints are correct, but we need to emphasize far more than is usual the latter view.

This same attention to disease processes in the tissues of the body as *accompanying* nephritis, but not as *caused* by nephritis is applicable in all forms of nephritis. In the so-called parenchymatous types of nephritis infections or chemical poisons have caused sufficient degeneration of kidney tissue to cause larger amounts of albumin and greater numbers of casts and red blood cells or epithelial cells in the urine. At the same time the infection or chemical poisons have injured the body tissues outside the kidney so that they have greater power to hold water and edema and anuria result, and uremia with headaches and nausea and vomiting result and albuminuric retinitis, and acute cardiac failure result. In so-called interstitial types of nephritis the small arterioles have become so altered by infection or intoxication or degenerative changes that high blood pressure results. These blood vessels supply insufficient blood to the tissues, so that the myocardium finally fails and angina or dyspnea result; loss of weight and muscular weakness occur or the brain has insufficient nourishment and mental irritably, loss of ambition, actual depression, insanity, headaches, dizziness, insomnia, twitchings, convulsions and coma develop.

Cardiac insufficiency may be the chief factor in causing the lack of nutrition in the kidneys as well as in other body tissues, and albumin and casts appear in the urine and edema in the dependent portions of the body, later general anasarca and cerebral symptoms appear. High blood pressure is not found in this type.

Anemia may lead to similar changes in the kidneys and body tissues. In brief, what we wish to emphasize is this: While infection, intoxication, vascular disease, cardiac failure and blood deficiencies are causing changes in the kidneys that result in the appearance of albumin and casts in the urine, they may also be producing changes in other body tissues so that edema, uremia, asthma, angina, disturbance of vision, vertigo may appear, but these affairs of the body outside of the kidney we have not yet

shown to be the result of kidney disease and we have shown them to be the result of the fundamental pathological processes named.

This prolonged statement of general pathology introducing the treatment of nephritis is justified because in our opinion it forms the basis of therapy.

In cases in which infection is the cause of the trouble the problem is to get rid of the infection and to restore the damaged tissues wherever in the body they may be. Unfortunately we are unable to rid the patient of infection by any known means in many cases of acute diseases such as scarlet fever, measles septic sore throat, influenza, pneumonia, etc., but in the more chronic infections existing in localized foci such as tonsils, sinuses and alveolar abscesses the source of infection may be eradicated. The problem is more difficult when we find as Ophuls, by stains of the kidney tissue and as Dick by cultures of the urine, have shown us there exists a persistent infection in the kidney itself. We know of no means of actively eradicating infection from the kidney especially when that infection is due to the streptococcus as it is so frequently.

In most cases of acute infection much can be done by simple measures to prevent undue injury of the kidneys or general body tissues. Among these measures are (1) rest in bed, to prevent the production of excessive fatigue and its attending intoxication; (2) careful precautions against chilling of the patient. (3) Dilution of the toxins of the body by freely flushing the body with water so long as the kidneys will excrete water freely. (4) Neutralization of the body fluids by the administration of alkalies in the form of the time-honored saline diuretics—citrates, acetates, and tartarates. For reasons to be given later these would best include not only the sodium and potassium salts but also iron, magnesium and calcium. Neutralization is also maintained by foods containing the alkaline salts, such as most of the leafy vegetables and root vegetables and the fruits without pits. (5) Maintaining nutrition as nearly as possible so as to prevent the damage attending starvation acidosis. (6) Avoiding irritants such as spices and condiments, the aromatic oils of raw onions and radishes and peppers, and the meats rich in purines and aminoacids. (7) Maintaining free movement of the bowels but avoiding distressing catharsis.

In the department of contagious diseases at the Cook County Hospital Chicago, since more careful attention has been given to the neutralization of the body fluids by the above means, and the routine milk diets have been abandoned,

the incidence of nephritis in those wards has diminished to less than 25% of their former number.

Obviously if such are the principles of prevention of nephritis, so also are they the basis of treatment. Problems become more urgent, however, when injury is already done, when edema is already established, when degenerative processes and resulting edema of the brain have brought on convulsions, when the kidneys no longer secrete water. In large part the problem is one of neutralization of toxins and unfortunately we have no adequate rational anti-toxin for many of the toxins nor have we adequate knowledge of the nature of the toxins. Insofar as available alkalies can neutralize the excessive acidity they may be used by mouth or by rectum; insofar as salts in the form of citrates or acetates or tartarates or sugar can be used in overcoming edema they should be used. In the latter connection one finds a basis for Lambert and Patterson' solution containing Potasii Bitartrate i dr., sugar i dr., Lactose $\frac{1}{2}$ oz. Lemon juice 1 oz., water qs ad io. Likewise one finds a reason for the long used colonic flushings with a half saturated solution of magnesium sulphate, although in this case care must be given that the large amount of concentrated solution does not remain long in the bowel. Small amounts of liquid magnesium citrate (containing not only magnesium citrate but sugar) repeated frequently until the laxative effect is produced may be useful. *In the beginning* of the treatment of advanced cases of this type it may be that retention enemata of Fisher's solution of sodium carbonate and sodium chloride are advisable. But in my experience they should be continued only a few hours or until the flow of urine is reestablished and its acidity is in part overcome. Then use some form of citrate, acetate or tartrate.

Spasm of the arterioles due to irritating toxins and vasomotor disturbances manifested by rapidly increased blood pressure may be a factor. Sweating by hot moist packs or otherwise is one of the most effective means of overcoming this and is advisable unless cardiac failure appears. In my opinion the value of sweating lies not so much in the elimination of much water and little poison through the skin as in the fact that vascular spasm is relieved, the blood is again allowed access to the tissues, and the heart's task is made lighter. When cardiac failure is indicated by dyspnea cyanosis and tachycardia sweating may be harmful and digitalis far more helpful.

Shall bleeding by venesection be performed? Yes, if uremic convulsions occur and if the price

can be paid. By this is meant that in cases of marked permanent arterial disease with myocardial degeneration, bleeding may result in seriously diminished blood supply to the tissues and, therefore, harm instead of help. More than once have I seen convulsions produced by bleeding.

Is lumbar puncture justifiable? Yes, as a temporary measure. It relieves the intracranial pressure and allows improvement of the blood supply to the brain. But its usefulness must be temporary and limited. The advantage should be seized as an opportunity to rush all possible agents to the brain that may help in restoration of its tissues. At the same time our general measures are restoring the general body tissues and the brain as well as the kidneys.

In what manner do our problems of therapy in chronic interstitial nephritis with high blood pressure differ from the above? In this, that the chief pathological factor is disease of the small arterioles. Our first effort is to remove the source of irritation of these vessels. It may be in a focus of chronic infection in the tonsils or nasal sinuses or about the teeth or a chronic cholecystitis or a latent syphilis, or gout, or abnormal indiscretions or excesses in diet. In such cases there is promise of help. But too often the seat of infection is in the kidney itself, or the injury was done by infection in childhood many years previously or there is an inherited quality manifested by degeneration of the blood vessels early in life. In these latter removal of the source of trouble is usually out of the question.

The general measures applicable in such cases are:

1. Rest, or restrictions of both physical and mental activity to the degree that the task required of the brain and heart and muscles may be provided for even by the impaired blood vessels. Often this means rest in bed for a time. Sleep is essential and bromides or barbitol or aspirin with a hot drink at bedtime may be helpful. But in advanced arterial changes these are not usually effective and opium is justifiable.

In most cases spasticity of the vessels is a factor and again the hot pack or hot cabinet is justifiable.

What has been said of diet and neutralization of body fluids and salines and laxatives are likewise applicable.

Return of restful sleep, relief from headaches, disappearance of irritability and depression; return of energy and ambition mark the success of management and the patient's continued well-being will depend largely upon his faith-

fulness in restricting his daily activities within the limits of his endurance.

The most brilliant results are often seen in cases of young persons without vascular disease or infection, and in whom marked albuminuria with casts and edema are due to cardiac failure. Rest in bed, digitalis and one of the caffeine derivations (diuretin) result in the most amazing loss of excessive fluids and the restoration of the patient to comfort and comparative health.

Attention should be called to a group of cases frequently met in young persons in whom the albumin, sometimes with casts, is extremely variable. Usually they feel well but have grown rapidly. Observation under hospital control shows that the albumin and casts disappear entirely with an hour's or a few day's rest in bed only to reappear when the patient gets up and about. Neutralization of the urine by the use of acetates or citrates or even sodium bicarbonate is promptly followed by the disappearance of the albumin even though the patient walk for miles. If the diet includes plenty of the proper vegetables and fruits, other means of neutralization of the urine may be unnecessary. The elimination of sources of chronic infection when present, and the establishment of a wholesome program of living will usually lead to a disappearance of the trouble.

In the preceding discussion, little has been said of salt (sodium chloride) restriction, because I have wished to pay some special attention to the subject of salt and alkali therapy. Soon after Martin Fischer's publication of his brilliant theory of edema and then his announcement of the application of that theory in the treatment of nephritis, we made a rather careful and earnest study of its use. We selected a series of cases of so-called chronic parenchymatous nephritis with edema in young people without any marked vascular or cardiac changes. The patients were placed at rest in bed and nutritional equilibrium was established on a meat free diet including fruit and vegetables and a constant daily fluid intake of 2000 c.c. or 2500 c. c. After three days a milk diet of equivalent caloric value and with the same fluid intake was substituted. After three days of this, sodium carbonate and sodium chloride were given in capsules over a period of one to three days. These were then stopped and the milk continued two or three days, then the diet including fruits and vegetables was reestablished.

The following observations were made:

1. Without exception the patients felt much better, had less headache and restlessness and

irritability and less edema when on the diet including fruits and vegetables than when on milk alone.

2. The acidity of the urine increased sometimes threefold within forty-eight hours after starting the milk diet.

3. The quantity of urine decreased after starting the milk diet and the albumin and casts and blood and renal epithelium in the urine increased sometimes to the extent that we dared not give salt and alkali or continue the experimental period.

4. The administration of the salt and alkali, or the salt alone, or the alkali alone, in the form of sodium carbonate, was followed by the appearance of headaches, restlessness, irritability, loss of appetite sometimes nausea and vomiting, markedly increased edema, decreased quantity of urine and increased albumin, casts, renal epithelium, and blood in the urine.

5. As the reaction of the urine passed from acidity to alkalinity to litmus there was observed a distinctly increased flow of urine lasting for several hours—indicating as Fischer maintains that the most favorable reaction for secretion of urine is neutrality to litmus.

6. Other salts such as the time-honored saline diuretics never produced the above harmful results.

While we were thus forced to conclude that sodium chloride and sodium carbonate administered in this fashion to this group of cases was actually dangerous, other experiences have prevented me from sharing with some in the condemnation of Fischer's theory in toto. On the contrary I believe he has made the greatest of all contributions to our knowledge of the subject of nephritis for several decades.

My experiences confirming the value of the theory have been as follows:

1. A child with marked subacute nephritis, marked edema and almost complete suppression of urine, which was very acid, had been in a comatose state and had had convulsions for forty-eight hours. Repeated bleeding and sweating and lumbar puncture had failed. Administration of a solution of sodium chloride and sodium carbonate by rectum for five hours was followed by the restoration of urinary flow, cessation of convulsions and return of mental faculties. Other salines were then begun and in forty-eight hours the edema had largely disappeared and the child was playing with her toys.

2. In certain other cases on Dr. Billings' service the administration of salt and soda together with large quantities of water was followed by rapid disappearance of edema and of

albumin and casts from the urine. It may be that these cases were akin to the variable albuminurias before mentioned.

3. Neutralization of the urine by the saline diuretics has never seemed to do harm and in most cases has been helpful.

4. The study of the influence of various salts on surface tension in emulsions is now being carried out by one of my associates, Dr. W. A. Thomas, and we hope to find some further light on the effect of salts and alkalies on physiological processes. In the meantime we do keep in mind that they are at most only one factor in the conditions associated with nephritis.

122 S. Michigan Ave.

DISCUSSION.

Dr. M. A. Mortensen, Battle Creek: It hardly seems possible that I can add very much to what has already been said to-day on this most important subject.

One of the things I think we should try and remember is the fact that nephritis is one of the diseases that is on the increase, particularly in this country. The mortality tables that have appeared in recent years show that nephritis is one of the diseases in which there has been a progressive increase. Associated with this, is also the cardiac diseases. Consequently it is of importance to know that we have got a problem with which to deal in order to save life and prolong life.

Much has been accomplished with some of the acute diseases; and now the problem is to duplicate the same thing in the chronic conditions. Some of the difficulties with which we have to contend in nephritis is that we are not absolutely certain of all the factors in the physiology of the kidney. There are various theories as to the modus operandi of the elimination of the various toxic products produced in the bile. We are not absolutely certain of the etiology. There are the infections and toxins, and the origins of the toxins are many. A careful study of official material and particularly the history of these cases, the habits of life, and so on, I think are of extreme importance in our work as observers of this class of cases..

Next, and of the greatest importance, is early diagnosis. That is where I think many unfortunate mistakes are made: I think any of us that have experienced dealing with patients that are sent to hospitals or institutions are frequently met with this condition. We go over the patient carefully and we come to the conclusion that there is something wrong with the kidney function or trouble with the kidneys; and in discussing that matter with the patient, they will immediately tell us that Dr. So and So examined his urine and told him there was nothing the matter with the kidneys. They may have had that done repeatedly over a period of years and received the same information, and consequently not have the trouble recognized early; and the

therapeutics, in order to be really valuable, should be given early. The earlier it is recognized the better will be the results because when we get the patient in the last stages with marked changes in the functional activities of the kidney, then our opportunities are limited.

I think that another important factor is that the general practitioner should recognize the value, for instance, of the elimination of water and the concentration of water. It seems to me that in many of the chronic cases this is one of the early changes that takes place and we all can remember case after case that will tell you they commenced to have profuse elimination of the urine at night as the first thing that made them think there was something wrong with the kidneys. That, in all probability, was the polyuria of beginning changes in the kidney.

There are one or two things in conjunction with the functional changes I think important to bear in mind and particularly in individuals, men fifty to sixty years of age, and that is the possibility of retention of urine in the bladder because of prostatic hypertrophy. Repeatedly I have seen cases in which there were evidences of disturbed function of the kidney where draining the bladder daily so as to prevent accumulation of residual urine has made a profound effect on the kidney. Just how it acts I am not in a position to say but in all probability it is reflex and here we must remember that in these cases the care of the bladder and the prostate must be considered in the treatment of such cases of nephritis.

Dr. E. W. Haas, Detroit: This interesting subject was up for discussion in the section on pharmacology and therapeutics at the recent New Orleans meeting and was discussed in a very interesting way. There is a very marked difference of opinion among various investigators as to the functions of the individual portions of the kidney. That is, the functions of the glomeruli and the functions of the tubules. This can be easily understood when we remember that one portion often compensates for another portion damaged. Then, too, there is a great difference in the so-called threshold of the kidney. We know, for example, a patient can have a normal amount of sugar and still the kidneys show a so-called nephritic glycosuria. On the other hand, with a largely increased amount of sugar it can show no evidence of the sugar in the urine. You get a change in the same patient from time to time. In other words, the ability of the kidney to secrete varies at different times.

It strikes me we can gain something from this if we consider the kidney from the embryological standpoint. In the early times, the fish in the water needed a simple mechanism. He possessed simply a glomerulus. When the animal began to climb over land, the necessity of conserving water and salt became apparent and then there was developed a tubular structure in which he was not only able to excrete but able to retain those things which are necessary for the body economy. Then added to that came the necessity for an apparatus which must be able to eliminate other products, the nitrogen bodies. The

kidney developed then into a rather complicated organ.

As Dr. Elliott of Chicago has so well mentioned before us, these various nitrogenous bodies which are practically obtained from the food ingested and then, to that extent, may be controlled—the uric acid, which consists of practically waste products of food retention and likewise from tearing down of tissues—seem to be entirely dependent upon endogenous activities. It strikes me that this man erred somewhat in the prognosis of the disease, as Dr. Elliott has pointed out.

In our work at Harper it has been shown that the substances most easily excreted, this substance which does not depend at all upon what the patient eats, but what the patient tears down, and is the most easily excreted, is a very prognostic sign. As the doctor's figures show, a per cent of five milligrams or so is a very careful estimation. As far as the uric acid estimates are concerned we know that uric acid may be retained in a case in which there is no kidney trouble at all. There have been many attempts made to differentiate the functions of the different portions of the kidney by different tests. Dr. Elliott also mentioned this. They thought for a time that the tubules, for example, alone secreted iodine. It has been shown in animals you can take a certain portion of the tubule and that consequently if you give iodine and it is not excreted in a definite time, we had tubular inflammation; if you gave milk sugar and it was or was not excreted that showed whether we had a glomerulus.

Christian pointed out that one portion can do the work of the other portions. As Dr. Newburgh pointed out, we have learned the danger of high proteid feeding. In that respect, I can only bear him out because we have found that some of our patients tested by some of these diets, for instance, the Rosenthal diet, were seriously damaged.

Dr. L. H. Newburgh, Ann Arbor: There is one point. Dr. Post talked about infection in the kidney as a type of Bright's disease. In my paper, I tried to emphasize that infection in the kidney was something else than Bright's disease. I tried to bring out the point that the kidney might be—was as a matter of fact—affected by the poison of infection at a distance. If Bright's disease is due to infection of the kidney, then we can hope a little of course to eliminate that infection by the use of the general methods of hygiene. On the other hand, if Bright's disease is ever due to toxins of infection, which infection is at a distance, we can hope to very frequently remove the source of infection showing the effect on the kidney. It seems to me of fundamental importance to make up our minds whether the infection is in the kidney or whether the kidney is harmed by the products of infection at a distance.

Dr. Arthur R. Elliott, Chicago: The study of a case of nephritis today is a matter of infinitely greater interest and more exactness than before we used these methods of investigation. Not

only bearing on a better comprehension but in its importance that the results possess in the way of regulation of treatment. Now, all are agreed that the most important arm of therapy against nephritis is the diet. Your methods of function, study of the kidney, its power of elimination of nitrogen and so forth—we proceed blindly in the regulation of our diet. Compare for instance the results of the last generation to what we are able to employ now in the way of exactness. You know the old prescription a few years ago was a meat-free diet or purely vegetable or starch diet, or a diet excluding one form of meat and allowing another, on a pure misconception. We know very little what our kidneys are able to accomplish in the way of excretion, and we can correspondingly modify the diet.

I know nothing more gratifying than to take a case and study it from the nitrogen accumulation standpoint, and on such a basis, give a diet containing a limited amount of nitrogen, and then watch the blood condition as the case proceeds under treatment. In that way, it is frequently possible, under my observation in the hospital, to entirely flush the system of excess nitrogen and to get a figure of two and one-half and three times normal down to normal in a short time. It places the patient on safe ground when previously on unsafe ground. Not that the nitrogen gives rise to uremia.

I want to warn you about some of the remarks of Dr. Post. Especially as regards his alkaline therapy. There is something reminiscent in this recommendation to employ alkaline therapy. Thirty years ago Thompson was strong in his recommendation. Dr. Purdy, I well recollect, many years ago used to cite with pride to the effect which the alkalization of the urine had in the way of diminishing the amount of albumin and what would be the effect upon the patient himself.

One wonders whether the employment of alkaline diuretics in nephritis would be a reality as we have come recently to realize. Any substance which may be excreted normally by the kidneys may be retained. They may be all given out on occasion and may be retained on occasion. Now the "buffer salts" of the organism are the phosphates. We know as the phosphates are used in neutralization of acid bodies, the acid sodium phosphate is formed and being excreted.

Now lately it has been realized that many nephritics, especially as they approach the terminal stage, retain proteids which give them an acidosis and we know it is a different acidosis from the acidosis of surgical anesthesia and of starvation because the ketone bodies are not concerned. They have high values for iron in the blood. It has been demonstrated I think pretty generally to the satisfaction of those who are interested that the retention of acid sodium phosphate gives rise to the acidosis of nephritis. I have no doubt many in the middle stage have some elements of acidosis and that the administration of alkalis may exert a good therapeutic effect by the neutralization of the acidosis. The fact that the carbonates do not do this as well

as the alkaline citrates and tartrates would seem to point favorably to that conclusion. Alkaline carbonates are much too strongly alkaline. If you give too much alkali you get a condition just as serious in its effects as an acidosis. The more alkaline salts may accomplish a neutralization and thereby effect a therapeutic value.

Dr. Hugo A. Freund, Detroit: If there is no such thing as an infectious nephritis, granting Dr. Newburgh's point of view in the matter, how are we going to classify those types of kidney in which we do find local lesions, whether due to secondary infection coming from a tuberculous lesion in the kidney or whether they are that type of focal infectious nephritis such as shown a few years ago in rabbits. We do not know whether in scarlet fever, in which the etiology has not been proven, the damage is done partially by the focal presence of bacteria or the source of infection in the kidney itself. So, that of course remains an open unsolved question.

Whether Dr. Newburgh wishes to qualify that new toxic nephritis or not makes very little difference, it seems to me. There is a definite type of nephritis in which you have signs of nephritis both in the blood chemistry and in the urinary findings associated with definite kidney function.

I think Dr. Elliott pointed out some very important things in regard to alkali treatment of nephritis.

'I don't see exactly, Dr. Post, how you are going to tell when you are keeping your urine at a neural point how definitely you are going to be able to tell when the alkilosis has gone so far as to produce dangerous symptoms; and, after all, what is the substance producing acidosis in the individual? The acidosis is not a production acidosis resulting from ketone bodies, but rather a retention acidosis. We say it is an increased CO_2 . What do I mean by retention acidosis? I mean it is primarily a renal disease, that the acid bodies have not been eliminated due to the destruction of the renal substance.

Dr. Post: That is what I am trying to learn, have been trying to learn for years. What portion of that acidosis is due to lack of renal function.

Dr. Freund: There is not an increase of elimination but of your other substances.

Dr. Post: There is the very point exactly. In our literature and experimental work, however, we have not proved whether that is due to the renal disease or due to disease back in the tissues of the body.

Dr. Freund: That I do not think has been proven except this point is true, that by the destruction of calcium salts they are able to change the acidosis in some cases because evidently we get calcium phosphate formed which is eliminated and the acid phosphates are therefore junked or put out of the way.

Any one can get into a lengthy discussion on the subject of acidosis. I do not believe there has been definite proof either on the side of tissue retention or on the side of kidney retention enough to warrant us to say definitely in any

case of sub-acute or chronic diffuse nephritis that the free administration of alkalis is always the wise and essential thing.

Dr. Wilber E. Post, Chicago: In regard to Dr. Newburgh's question, I feel that the question of the existence of infection in the kidney, with the bacteria in the kidney itself, in these various forms of nephritis, is still an open question. But I personally am beginning to lean towards the view that many of these that have been supposed to be damages due to toxine are really due in part to the presence of bacteria in the kidney; because, as Ophuls has shown in his work, there are bacteria tissue in quite a percentage. Dick in his work on the cultures of the urine showed a very high percentage, over sixty per cent., that contain streptococci. Those two workers, working independently, one on tissue and the other on urine, with such results, lead me to think we have very frequently at least when we have not suspected it, infection in the kidney itself. So far as I know we have no other clinical means of differentiating the evidence.

Furthermore, the experimental evidence mentioned by Dr. Freund of Detroit, that is the LeCount and Jackson methods, produce the typical lesions in the kidney of chronic nephritis by repeated injection of bacteria. I don't know what Dr. Newburgh's attitude is toward the work of Longcape but the pictures in an article published ten or twelve years ago, giving the effect of repeated anaphylaxis were identical. Why couldn't we have that in an ordinary human being as well as in a rabbit? Clinically in the cases we have to deal with, those two sources of infection and intoxication ought to include the chief etiological factors.

In arthritis, the brilliant results of tonsillectomy I believe come in those cases in which the irritation of the affected tissue is due to a toxine. When you remove the tonsils, the joints clear up promptly. If the trouble is due to an active infection in that joint, it does not clear up, and the infected kidney won't clear up when you take out the tonsils.

Now, then, the functional tests. I would not like to be misinterpreted about my remarks about the unsatisfactory nature of our renal functional tests. I think that they have added wonderfully to our knowledge of the disease we call nephritis and they certainly have added greatly to our interest in working up a case these days; and I believe in doing that and in studying further, but I don't believe that we have any adequate test of renal function except the simple ones that Dr. Mortensen mentioned, or whether the kidney secretes solids and water or only water. Whether the disturbance of these various tests from the normal is due to the trouble in the body tissues whereby water is not allowed to get to the kidney or whether due to trouble in the kidney or whether it is attributed to both, we have yet no means of telling.

Now, as far as alkali therapy is concerned I would say the same about that. As far as the perfection of our guides is concerned, I don't

think we have any adequate means of telling. The best we have, I think, as far as I am concerned, is to be guided by the clinical symptoms together with the fact that the urine of the patient hovers about the neutral point. As far as the different kinds of salts are concerned, I think that is a very open question. The investigations that are now going on teach us a great deal.

You know that if you take a certain kind of alkali and put it into a mixture of water and oil, an emulsion of water in the oil is formed. The water will be in droplets and the oil around it. If you change the salt, you can reverse that and make it an emulsion of oil in water. And the neutral point where those salts balance, that influence it one way or the other, may some day be shown to be the most favorable combination of salts for the treatment of edema and for the activity of metabolism. How are you going to measure it? I don't know. I do pretend, however, that we ought to avoid over-acidity of the body fluids in nephritis and that you help the patient when you diminish this acidosis.

Dr. Elliott: Regarding the cause of the increased acidity in nephritis. It does not exist in all cases.

Dr. Post: I don't know, sir. Do you?

Dr. Elliott: I don't know that I do. I have an idea it may be due to the kidney insufficiency resulting from the nephritis.

Dr. Post: As I said in my paper, I think perhaps it is due in part to that. In a number of papers I noticed just recently there is a sort of epidemic among workers not only in this country, but in Europe. The retention theory really does not account for the increase, for instance, of the undetermined nitrogen in the plasma of the blood. It must be accounted for by an increased development of those proteids in the body. In these typical cases of nephritic acidosis, we don't know whether it is due to lack of excretion or whether it is due to some form of disturbed metabolism.

Dr. Elliott: To say a certain effect of nephritis is not produced by organic disintegration resulting in disturbance of the chemical balance is an element injected and secondary. There is much that awaits proof of nephritis. For example, we know in a way that at a certain point in nephritis, if you take a case of nephritis after it has attained a certain point—anything you can employ has no effect at all.

Dr. Post: Can you illustrate that?

Dr. Elliott: Suppose you take a case of nephritis that gives you the test of let us say, a test of half of one per cent or perhaps zero—that is a chronic process—any effort you may employ, you may put that patient on as careful a balanced diet formula as you possibly can, and you cannot save him. Eliminate to the extent of your ability, and your nitrogen accumulation will go right on, because the tissue breakdown is progressing rapidly.

Dr. Post: Those are very interesting things. I just wondered what you think that is due to.

Dr. Elliott: I presume it is one of the effects of the disease.

Dr. Post: Is it due to retention by the kidney?

Dr. Elliott: And the influence upon the body balance or retained waste products. That is the way it would appeal to me.

Dr. Post: That is the way I was taught, but I have been so disappointed by its failure in application in my experience that I want to ask the other question, and then I find that there are people asking the same question.

The Chairman: I think possibly your program committee may have been criticised for giving you such heavy food this afternoon. Now, I think this discussion has really proven that your committee was correct, that the subject of nephritis demands a great deal more study and frequent discussions.

EPIDERMOPHYTOSIS.

R. C. JAMIESON, M.D.,
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The classification of dermatoses is no longer as simple as it was when two distinctions were made—if it itched it was eczema or scabies, if it didn't it was something else. The therapeutic test no longer holds good, those which are healed by sulphur or zinc oxide ointment and those which are not. Eczema, in particular, which has been the disease most often called upon to explain a skin eruption is now being shown to be a result of various irritants (external or internal) and not a distinct disease entity. Pathologically, eczema—literally a "boiling out"—is identical with dermatitis. This, however, applies to those cases in which an irritant is the source of trouble and not those in which a separate cause has been discovered. These should not have the term "eczema" applied to them at all.

It is not our purpose to discuss all types of so-called eczema such as one sees due to occupation, irritation of clothing, dyes, drugs, etc., or those due to ingestion of food producing a dermatitis by sensitization, dermatitis due to some neurosis or even that large class embracing diseases that cannot be conveniently classified otherwise and are called eczema for lack of a better term. The cases presented are types of a so-called eczema that we have paid particular attention to since 1916, when Ormsby and Mitchell demonstrated that many cases of eczema affecting the hands and feet and treated as such unsuccessfully were due to a type of trichophyton. Until that time the term "ringworm" meant nothing except an annular, mildly inflammatory lesion of varying size, which scaled a little, caused no subjective symptoms and which was

readily amenable to treatment. Or a similar lesion on the scalp, rounded and having the center filled with short nibbled-off hairs.

As far back as 1842, this disease was known to be of a vegetable parasitic nature, but it was not until years later that the subject was more fully investigated, Sabouraud, among others, identifying and classifying a large number of varieties of trichophyton, only a comparatively small number of which are found in human dermatoses, the most common being *T. crateriforme*, *T. acuminatum*, *T. violaceum* of megasporon endothrix group and *T. asteroides* of the microid ectothrix, *T. rosaceum* of the megasporon. Epidermophyton inguinale is generally found in the groin.

From a clinical point of view epidermophyto-



Single well marked typical area, showing undermining of skin with collarette around edges.

sis we now know to be what was formerly called a type of eczema, presenting as it does many of the classical symptoms ascribed to eczema—itching and burning, some weeping, mild inflammation and slight swelling. It illustrates excellently that eczema is being divided into many diseases according to the etiology and is no longer regarded as a distinct clinical entity. The so-called dhobie or washerman's itch and eczema marginatum are now known to be an epidermophyton infection and readily respond to treatment. One of the most common types and locations is that which presented all the clinical manifestations of a chronic eczema of the fingers and hands, involving particularly the interdigital and extending somewhat to the dorsal and palmar surfaces. On the toes it was found especially between the 4th and 5th on account of the heat, moisture and lack of ventilation.

These lesions would first appear as one or many small, deep-seated, not easily ruptured vesicles in the locations mentioned, following,

perhaps, a history of tinea cruris. Itching would be at times intense and would be followed by extension of lesions with a definitely defined border to the patch. These vesicles would at times closely resemble the vesicopapule of scabies or the deep vesicle of pompholyx and the disease would be frequently confused with these on account of the location of the lesions. The vesicles would tend to approach the surface, dry and form a thickened scale, and, if the lesion were plantar or palmar, would result in a large hyperkeratotic plaque studded with deep, dried vesicles. After a variable period the typical appearance on the hands and feet would be patches more or less rounded with a definite border, the center composed of a mildly inflammatory area having vesicles or remains of vesicles scattered through it. Sometimes the advancing border would elevate and loosen the superficial layers forming an undermined collar around the lesion. The newer vesicles would exude a small drop of serum on puncture.

Subjective symptoms would vary according to the severity of the disease, being mildly pruritic or even intensely itchy and painful in long standing cases. The pruritus in these cases, however, differs from that in which the dermatitis is of the acute inflammatory type and is not made worse by the use of soap and water as we were formerly taught to expect in eczema. In very chronic cases the infiltration may become pronounced enough to cause deep fissures to appear around the joints, these being productive of pain on motion.

Cultivation of the organism from the cases in our clinic has not yielded satisfactory results as all the cultures have been contaminated by other organisms or failed to grow at all. Sabouraud's media is the one advised for use and on it Ormsby and Mitchell succeeded in obtaining a growth—in their original series—six out of seventeen being Epidermophyton inguinale. They describe the growth on media as "a small, greenish-yellow point, which becomes powdery on the surface, with the color of an unripe lemon beneath. The center gradually becomes acuminate and may become elevated to the height of 1cm. In the course of from three to six weeks, a fluffy, pure white tuft appears at one or many points." Further description of this and other varieties of this group may be obtained from Sabouraud's exhaustive work on the subject, "Les Teignes."

In order to exclude other diseases which may produce similar lesions a microscopic examination is necessary, although this is frequently negative on one or more attempts to discover the organism. Failure to find the spores and

mycelia on the first examination should not lead one to diagnose the condition as non-parasitic, but subsequent efforts should be made to de-



Face secondarily affected.

termine its presence. Ormsby and Mitchell recommend this method for microscopic examination—remove the top of one of the older vesicles with a sharp knife (the older, dried



Showing typical infection on hand of "chronic eczema" type.

vesicles being more likely to contain organisms.) This scale is then covered with 15% sodium hydrate on a slide which is then heated until the liquid boils. The cover glass is then pressed

down firmly, adding more fluid and heating until there is only a thin film under the glass. The spores are loosely attached to each other, tend to a quadrilateral shape and are interspersed with mycelial threads running in all directions.

We have been repeatedly struck by the apparent increase in the number of cases seen in the last year or two, but we are inclined to believe that is more apparent than real and that the increase is due to recognition of the disease and to improved methods of diagnosis and treatment. That this condition of epidermophyton infection is more frequent than is generally imagined is shown by a report of skin diseases at Camp Pike in which it ranks second in frequency, scabies being the first. The duration



Infection on abdomen following appendectomy.

of the disease has varied a great deal, being a few weeks in some cases, in others several years. We also recognize now that it can be communicated in many more ways than it was formerly supposed to be. It has been found that many cases could trace their infection to former epidermophyton infection of the groin which had been cured and forgotten. Animals can be responsible for the infection in many instances, some of which are of a particularly severe type and resistant to treatment. This had happened in a veterinary surgeon recently who had become infected in the beard from handling animals. Other sources of infection include the use of contaminated clothing, contaminated towels, indiscriminate use of socks by athletes and even the floors of locker rooms where infected individuals walk with bare feet.

One patient with a widely disseminated infection stated that it could be traced to the use of some underwear sent back from the laundry.

This was the most extensive case seen as he had at least fifteen or twenty areas varying in size from one to three inches scattered from his head to his feet and involving even his scalp.

Tricophytosis or epidermophytosis is found in all parts of the body, head, glabrous skin, axillae, groin, hands, feet and nails, but as the diagnosis of ringworm of the scalp, groin and axillae and *tinea circinata* is so obvious we will consider only the differential diagnosis of epidermophytosis in locations where it could be confused with lues, dermatitis, pompholyx, pityriasis rosea and seborrhoeic dermatitis.

When lesions in the palms and soles have become chronic with a great deal of hyperkeratosis, itching and desquamation it could be mistaken for a squamous syphilide which frequently will present those manifestations. Lues



Affecting hands and arms—Lesions vary in size and shape.

in that location does not, however, itch so much nor is there apt to be the same degree of hyperkeratosis with many pin-head sized lesions showing through from the lower strata, representing dried vesicles. A Wasserman test and a microscopic examination as mentioned above should serve to make the diagnosis. There has been only one case which has come under my observation in which luetic lesions simulated epidermophyton on other parts of the body. The lesions in this case were chiefly on the face, hands and back, slightly inflammatory, with a small amount of pruritus, beginning as small groups of papulo-vesicular lesions. Diagnosis was not confirmed until a 4 plus Wasserman was found, the lesions promptly disappearing under anti-luetic treatment.

A chronic dermatitis on the dorsum of the hands—so-called chronic eczema—could readily be mistaken for epidermophytosis. In the vast majority of these cases, however, there is definite

history of trauma with frequently the occupation as the cause of the dermatitis. The areas involved are more painful than itchy, the skin is completely and more deeply involved without deep vesiculation and scaling. Nor are there areas where the inflammation is scarcely noticeable with more acutely involved areas scattered between. The border is usually limited by the line of clothing at the wrist or elbow and withdrawal of the irritant will usually allow the dermatitis to heal.

Pompholyx is frequently confused with epidermophytosis of the palms and soles but has a few points of distinct differentiation. The disease is bi-lateral and usually affects both palms and soles alike simultaneously, appearing as deep-seated, non-inflammatory vesicles with the first hot weather each year. These soon approach the surface, dry, desquamate and then disappear. It has no tendency to become chronic, will disappear without any specific medication and is now considered to be a dysidrosis. There is no fungus associated with it.

Acute dermatitis from plant poison, as typified by poison ivy, could be confused with certain varieties of epidermophyton but there is always a history of exposure, burning, swelling, itching and rapid development in dermatitis venenata.

Certain types of pityriasis rosea and seborrhoeic dermatitis may resemble a *tinea circinata*, but the latter is so rarely multiple that it is hardly necessary to differentiate the symptoms here.

The routine treatment which we have adopted has been successful with but few exceptions. After thorough soaking of the part with a warm saturated solution of boric acid, removal of crusts and scales as much as possible, Whitfield's ointment is applied and bound on. This ointment consists of salicylic acid 2 parts, benzoic acid 4 parts, benzoinated lard or lanolin 30 parts. Starch may also be added if desired. Many cases were treated with this ointment alone, others were treated with X-Ray only, but those who improved the most rapidly and permanently had a combined treatment. The ointment was used as indicated above and the affected areas were given one-half a mass dose of X-Ray every week or ten days. This produced a very rapid drying of the lesions. Itching was relieved very shortly and involution was hastened by at least fifty per cent.

This, in our opinion, is the most ideal method of treatment and we believe it should be used in all cases for the most prompt results.

Slight recurrences may be looked for in many

cases as it frequently happens that some of the deeper seated organisms are not destroyed, but a repetition of treatment will promptly stop it. 1541 David Whitney Bldg.

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THE CHOICE OF CATARACT OPERATION.*

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The tabulated cases in this report showing the choice of operation include all the operations performed for the extraction of senile cataracts in the Ophthalmologic Clinic of the University of Michigan, from 1905 until 1920, together with those performed on private cases from 1894 until 1920, with the exception of the intra capsular cases which include all up to date.

While all the cases are tabulated in reference to the type of operation performed, I shall discuss especially the Indian operation and the extraction in the capsule by means of traction on the capsule combined with external manipulation as described by Knapp and modified by Török.

The total number of each type of operation follows:

Combined Operation	936
Simple Operation	154
Preliminary Iridectomy	88
Indian Operation	89
Intra-capsular by traction	25
Previous Iridectomy	4
After Trephine Operation for Glaucoma	2
Unclassified	22

Total1320

I shall not attempt to give statistical results of the operations in this paper, but shall speak of method of procedure with conclusions.

The subject of choice of cataract operation is one that has been open to discussion for many years. While certain modifications have come and gone, the combined operation with conjunctive flap has held its own very well and today is the procedure most acceptable to the majority of operators. Among the substitutes for the classical operation, two are now most conspicuously before us, namely the Indian

method and the Knapp or Török operation. Both aim to remove the lens in the capsule, the Indian operation by external manipulation, the other by traction on the lens capsule (Knapp), or by a combination of traction and external manipulation (Török).

That the Indian operation can be successfully performed in certain cases there can be no doubt. But when complications arise, they are often so serious as to force many to the conclusion that the combined operation on the whole is a much safer procedure, at least in this country. The more serious complications of the Indian operation are loss of vitreous, distorted pupil and a disturbance in the anterior vitreous resulting in more or less permanent impairment of vision.

In April 1906, I published the result of my initial Indian operation. This report, as far as I know was the first to appear in this country. The operation was performed with ordinary squint hook and lid elevator. The lens was removed without difficulty, with no accident and the recovery was uncomplicated. That the patient was satisfied, is evidenced by the fact that seven years later, he presented himself at the clinic and requested that the same type of operation be performed on the second eye. This was done with an equally good result, the regular Smith instruments being used. In all, I have performed 89 operations after the Indian method. Many of them were as successful as the first, but gradually, as the number with complications increased, I found myself going back to the old operation, as in my hands a safer and more dependable procedure. This conclusion was reached not after one attempt, but after several honest endeavors had been made to determine the relative merits of the two procedures, renewed effort being prompted by the glowing reports of the enthusiastic adherents to this method of extraction. I now fully agree with Knapp, who after receiving instructions from Col. Smith in India and attempting the operation in New York, came to the conclusion that the lens cannot be dislocated by external manipulation alone without in many instances subjecting the eye to greater pressure than seems wise.

In 1915, Knapp reported a series of one hundred successive extractions of cataract in the capsule, with the traction method.

As described the operation is performed as follows:

The section must be large and should be just short of half the corneal circumference with a conjunctival flap. After iridectomy, the capsule forceps is introduced to a point below the

*Read before Section O. A. R. L., M.S.M.S., May 27, 1920.

center of the pupil, the branches are then allowed to broadly separate, and a distinct knuckle of capsule is grasped. The grasp should not be too tight, lest the capsule be torn, but sufficiently firm to exert traction on the periphery of the lens capsule. The closed branches of the forceps are gently moved from side to side, up and down or rotated, and the capsule can be seen to follow in the various directions. When the dislocation has succeeded, a part of the margin of the cataract in the capsule appears free in the pupillary space. The portion dislocated is usually below, generally slightly to one side or the other, with the upper attachment unruptured. The forceps is then released and withdrawn. Pressure is exerted straight back on the lower part of the cornea with Smith's hook and the cataract can be seen to turn a somersault; it "tumbles" in other words as Smith calls it, and is delivered feet first. When the entire lens has been delivered, it will be found adherent above where it is finally separated by a lateral stroking motion. In some cases, the head presents first, the delivery is then slower and counterpressure must be applied at the scleral margin. The iris columns are then carefully replaced. The coloboma should ultimately not appear any different from that after an ordinary extraction.

Török later suggested that in addition to traction on the lens capsule, external manipulation be employed and further, that when the lens becomes luxated the forceps be not released but that the delivery of the lens be external manipulation be facilitated by a gentle traction on the capsule.

The great advantage this operation holds over the Indian method of extraction is that if one fails to sublunate the lens, a much larger piece of the anterior capsule is removed than with the toothed capsule forceps, and the operator may proceed as in the regular combined extraction.

The forceps designed for grasping the capsule is flattened at the extremities, cup-shaped, and without teeth.

I have attempted the removal of the lens in the capsule by the Török method 25 times, and succeeded in accomplishing the desired result in 12 cases. There was loss of vitreous in one case, otherwise there were no complications, and all made a good recovery. The cases were selected in reference to their probable conduct during the operation and not in regard to the

character of the cataract. In no case, if the patient did not have good control, was the intra-capsular operation attempted. In the first 10 cases in which the attempt was made, the capsule ruptured in 8. In the next 15 cases, the lens was delivered intact 10 times, and ruptured 4 times. Total 25 attempts with 12 successes, 48%.

The character of the cataracts was as follows:

	Success	Failure	Unclassified
No.	12	12	1
Immatured	5	8	
Matured	4	3	
Hypermatured	2	1	
Traumatic	1		

In every instance in which the capsule ruptured, the ordinary combined operation was completed without accident.

In the first ten cases a Kalt forceps was used to grasp the capsule, while in the last 15 cases, Voerhoff's modification of the Kalt was employed. The latter is so constructed that the opening between the blades can be controlled as well as the pressure made on the capsule after it is engaged in the forceps. How much the results were affected by the forceps used, and how much by my inexperience in the operation, I am unable to say. My impression is however, that the Voerhoff forceps is preferable.

While this experience with the traction operation is far too small to justify conclusions, I can say the procedure is much less hazardous than the Indian operation, and I am encouraged to continue in its use in suitable cases.

The simple extraction was performed in young patients and in selected senile cases in which the iris was left intact, the eye was examined the day following the operation, and if a prolapse was present, an iridectomy was performed at once.

A preliminary iridectomy was performed in cases in which the cataracts were developing equally in both eyes and an improvement of vision could be obtained by the use of a mydriatic. Also in cases known to have fluid vitreous or in which the operation on the fellow eye had been followed by serious inflammatory reaction and all cases with even suggestive symptoms of glaucoma.

Like all surgical procedures the choice of cataract operation should be determined by the conditions present, as no single operation is applicable to, or best suited for all cases.

ACUTE FIBRINOUS BRONCHITIS.*

(WITH REPORT OF CASE AND PRESENTATION OF SPECIMEN.)

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Acute Fibrinous Bronchitis is a relatively rare disease characterized by the formation in the bronchial tubes of a fibrinous material which may be thrown off as a cast. Chronic Fibrinous Bronchitis, while rare, is more common than the acute form. Elsner states that in 30 years he had seen but one case and that was of the chronic type. Bettman in 1901 reviewed the histories of 15 acute cases (Johns Hopkins Med. Bulletin) and came to the conclusion that they were much more serious than the chronic form.

The disease is rarely a primary one, usually occurring secondarily to diseases of the lungs and bronchi. Thus cases are reported in patients having asthma, tuberculosis, pneumonia, diphtheria, measles, scarlet fever and actinomycosis. A few cases are on record associated with the passive congestion of cardiac disease. Cautic poisons and irritating gases have been responsible for a few. Osler reported a case due to the *Aspergillus Fumigatus*. Ortnier reported one case in which the membrane gave a pure culture of streptococci. Occurring as it does in such a variety of diseases, it is probable that there is no known specific cause. Bacteria are usually incriminated but attempts to produce the disease experimentally by intratracheal injections of bacteria have failed.

The casts vary in length and may involve the whole bronchial tree. They consist of laminated deposits of fibrin and mucin, infiltrated with leucocytes and epithelial cells. The underlying mucosa may be injected or pale, and the epithelium either denuded or intact. A wide variety of organisms have been grown on culture.

The symptoms and signs are best described by a case report.

Chas. W., age 7, schoolboy. Seen in consultation with Dr. J. W. Sooy, April 30, 1920.

Family History: Father and one sister have asthma.

Personal History: Influenza in January, 1919; measles in Dec., 1919.

Present Illness: On April 26th, he became chilly and was seized with a dull pain in the right chest. He had non-productive cough and felt so badly that he took to bed. On April 28, he was seen by Dr. Sooy who reported that he had a temperature of 103, resp. 46 and pulse 140. He

was restless, coughed a great deal, was short of breath and still complained of pain in the right chest. There was an area of dullness in the right lung posteriorly, over which was bronchial breathing. This did not involve the entire lobe. There were diffuse sibilant rales over both lungs. On April 29th the dyspnea had increased and cyanosis became apparent. On April 30th, when the writer saw him, the dyspnea and cyanosis became so extreme that it seemed as though he would soon be asphyxiated. In a severe choking spell, he commenced to vomit and expelled the cast presented to this society. This cast was about 23 cm. long and varied from 2 cm. at its widest part to 2 mm. at the ends of some of the branches. It was greyish white in color, tough and elastic in consistence and its lumen contained clear mucus. On further examination of the cast it was shown to contain no fungi, diphtheria bacilli, or spirochetes, but gave a culture of streptococci of an undetermined type.

Upon expulsion of this cast the boy became quite comfortable and physical examination was completed. It was noted that respiratory movements were somewhat restricted on the right. Anteriorly, with the exception of scattered sibilant rales, and diminished breath sounds towards the bases, there was nothing to note. Posteriorly on the right there was an area of dullness from the 5th to 9th ribs and extending out to the axilla. Over this area were bronchial breathing and increased voice sounds. Below this there were no breath sounds to be elicited. Above this area, to the level of the spine of the scapula, were sibilant and sonorous rales. On the left side posteriorly, there was a small area of dullness from the 4th to the 8th ribs, and extending out to the scapula. Over this area and somewhat below it, could be heard a great variety of rales, viz sonorous rales, coarse moist rales and a rale of a peculiar flapping character, the "bruit de drapeau" of the French writers.

During the next few days the boy improved rapidly, expectorating considerable mucus and several small plugs. By the end of a week there were no abnormal findings to be elicited in his chest.

Up to date (Oct. 29, 1920) the patient has remained well. One may well wonder if, in view of the family history of asthma, he may not have similar attacks in the future and so necessitate changing the diagnosis from acute to chronic fibrinous bronchitis.

Treatment: Potassium Iodide gr.5 every 4 hours seems to be of value. If the dyspnea and cyanosis are extreme, emetics should be given, provided the heart is not too much embarrassed. Apomorphine in doses of gr 1-20 to 1-10 hypodermatically is most suitable. Morphine should be avoided on account of its depressing action on the respiratory center and because it dries secretions. Pilocarpine has been advised but I should be afraid of producing edema of the lungs with it. Ortnier has given Antistreptococcic Serum with good results in one case. Inhalations of steam from lime water, as suggested by Diermer, may be tried.

715 S. Saginaw St.

*Read before Mich. Trudeau Society, October 28, 1920.

TREATMENT OF NEOPLASMS.*

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During the past few years, many advances have been made in the diagnosis and treatment of neoplasms, producing a lower mortality and morbidity. We believe that patients are presenting themselves earlier for examination of suspicious growths or symptoms of such, and also that earlier diagnosis of malignant tumors are being made by the medical profession.

There will always be patients who will not be examined by a physician until the disease is well advanced, even for this class much can be done to relieve the sufferer, if we have the proper vision.

Our responsibility in the treatment of malignant diseases is great and we must accept it, however, the satisfaction of having even a percentage recover from this dreaded disease is very gratifying.

It will be well to remember that cancer is always first a local disease; but in certain types very readily invades, extends or metastasizes. Therefore, we must attack it with all the means we have to check its progress, namely efficient surgery, X-ray and Radium, combined to suit the case in hand.

CANCER OF THE LIP.

In our opinion, early cases of carcinomata of the lip, may be entirely cured by radiotherapy, radium being applied to the lesion and radium or X-ray combined, to the adjacent lymphatics. In the ulcerative type with or without lymphatic extension, these should have pre-operative X-ray treatments over regions of extension, (as advised by Dr. Rolland Stevens) and others, two weeks later radical excision of the submaxillary, submental glands, second step, excision of the lesion by wedge incisions. The first or second day following the operation, a second X-ray treatment, or radium application. These should be continued at intervals of twelve to sixteen days, with occasional periods of rest, for two years.

CANCER OF THE NOSE AND THROAT.

These cases have not been proven satisfactory when treated surgically as radical excision is often impossible on account of the location and extent of the disease and incomplete operation seems to stimulate the growth of the disease.

In operative line, the best results follow the use of the thermocautery to destroy as much

of the tumor as possible followed by radium in the cavities and X-ray treatments to the cervical glands.

Osteo-sarcomata of the antrum seems to be very amenable to the action of radium.

Radium is much the best method of treating cancer and sarcoma of the tonsil and larynx, and should not be preceded by operative measures.

CANCER OF THE TONGUE.

These cases, especially the well advanced forms, we all know are very unsatisfactory to treat, either by excision, thermocautery, radium or X-ray. We have a few early cases which were given pre-operative ray, two weeks before the operation, excision of the growth, radium application the second day after the operation, radium and X-ray therapis to the adjacent lymphatics. These cases are still receiving their post-operative treatments and are doing very well. We know of some cases which have been refused operation, on account of enlarged lymphatic glands, some of these have been proven, by miscropical examination to be purely inflammatory. We would usually advise against operation in cases with secondary infection in the lymphatic glands.

CANCER OF THE BREAST.

About five years ago, a woman 34 years of age, was referred to us, who had an amputation of the left breast six months previous, performed elsewhere; four months later she presented herself to her family physician, with a mass the size of a goose egg, in the left axilla, and slight supra-clavicular involvement. The mass in the axilla was fixed to the surrounding tissue and axillary vessels so that it seemed impossible to perform a complete excision. With the knowledge and observation that X-ray had acted favorably on many superficial cancers, we directed this patient to have a series of X-ray treatments of the axilla, lungs and supra-clavicular regions; hoping to prolong her life, but hardly expecting any permanent results. Roentgenograms of her chest were negative for lung involvement.

Much to our surprise after three treatments, the axillary glands were reduced about 50% and freely movable; the X-ray treatments were continued. Two months later we excised the glands and noted how easily this was accomplished. Microscopical examination showed them to be scirrhus carcinoma. This was our first case in which we used pre-operative X-ray for cancer. Since this time we have always advised pre-operative X-ray therapy, before radical operation for carcinoma of the breast. The

*From the Clinic of Doctors' McLean, Brooks, Barrett and Clinton.

routine is as follows: (1) From one to three treatments every twelve to fourteen days, the dosage should be as large as can be tolerated by the patient's tissue and should be directed to the supra and infra-clavicular axillary regions, opposite breast, mediastium and over the liver. (2) X-ray plates of the chest and if patients complain of back or hips, plates of the spine and pelvis. (3) Radical operation performed from one to two weeks following last treatment. (4) The first or second day following operation the X-ray treatments are continued in series at two week intervals, with occasional one to three month intervals. (5) In every extensive axillary involvement, radium is applied in axilla the dosage depending upon the involvement.

Since we have been using the above method, we have not seen a local recurrence in the skin or in the axilla. We have operated on some cases which seemed in-operable at the time, and even in these cases, by removing all the cancer mass, followed by radio-therapy, we have a number that have passed the three year period.

We have seen three cases in the last two years, when the patients presented themselves for operation for extensive carcinoma very late in the disease, who developed carcinoma of the femur, in two cases fracture followed the carcinomatous invasion, in one case both femurs were fractured; but in neither of these cases was there any signs of local involvement at the time of death.

Ewing has shown from a large number of autopsies, that pleura, lungs, liver and bones metastasize in the following percentage 50, 40, 48, 20 respectively. This is exactly in accord with our records in deaths following cancer of the breast.

GASTRIC AND INTESTINAL CARCINOMA.

The treatment of cancer of the stomach and bowel will depend in a large measure on the time of the diagnosis. When possible, a radical operation should of course always be performed. In our opinion radiation over the liver and epigastrium should precede operation, when this can be done, with out too much loss of time.

Each case should also receive post-operative radiotherapy, carcinoma of the ileum occurs in 2% of the total number of cases of cancer of the bowel, (*Ewing*); these are usually the colloid type.

Cancer of the caecum, hepatic and splenic flexures of the colon, as well as of the transverse, should in addition to radiation have a

preliminary colostomy, then radical excision whenever possible and closure of the colostomy a few weeks later. Then, by this three stage operation the mortality following resection of the large bowel will be reduced to a minimum.

CANCER OF THE RECTUM.

1. These cases should receive pre-operative radiation followed by temporary colostomy, examination of the liver and glands is made at this time and we decide if the case is favorable for operation; if this is the decision, radical excision is performed, leaving the colostomy as a safety valve to be closed in ten days to three weeks.

2. If the case in hand is not deemed operable, as soon as colostomy drainage has been established, radium in small frequent exposures is instituted. All these cases receive deep X-ray therapy to inguinal, hypo-gastric, lumbar and hypochondriac regions, and the results in some have been very favorable.

CANCER OF THE UTERUS.

We believe that Radiotherapy has made a most marked improvement in the mortality and morbidity of cancer of the uterus, especially those of the cervix. In cancer of the fundus, wherever possible a complete hysterectomy should be performed and followed by deep X-ray therapy to the inguinal hypogastric umbilical and lumbar regions.

However, with early lymphatic extension in squamous celled carcinoma of the cervix, with early invasion of the portio vaginalis, bladder, and rectal walls, surgery alone according to ultimate results is not favorable. We formerly cauterized these large cauliflower growths and then followed up with intensive radium and X-ray therapy, and have been agreeably surprised with the results.

We have treated a large number of these cases without using the cautery and have seen the distressing symptoms almost entirely disappear and the mass disappear and heal over smoothly with two or three radium exposures, combining this with the X-ray as advised above. We believe that radium will be the method of choice in cancer of the cervix, as soon as comparison of both methods of those qualified to judge.

In a small percentage of cases, usually in women below thirty-eight, radium does not seem to work as well, but this may be due to our limited knowledge regarding its methods of application, dosage and the very rapid growth of the disease.

CANCER OF THE BLADDER AND PROSTATE.

Papillary carcinomas of the bladder have been treated successfully with fulguration, many of these cases are apparently cured by radium therapy applied to the base of the tumor, through supra-pubic opening, or in small involvement through the urethra by cystoscope.

It is advisable to have microscopical examination made of all hypertrophied prostates removed as occasionally there are small areas of adeno-carcinoma. Radium seems to have a very beneficial effect on prostatic cancer and may be applied through the supra-pubic opening, per urethra and per rectum, or may be used in needles directly into the tumor.

It seems the opinion of most writers that cases of carcinoma of the prostate very early in the disease invade the surrounding tissue and extend along the lymphatics, so that very few are operable. We have had a few cases show marked improvement under radium and X-ray treatments.

UTERINE MYOMATA.

Many observers have noted the beneficial effect of radium and X-ray on vascular tumors, such as lymphangiomata and cavernous angiomas, but it has only been for the last few years that the uterine tumors have been treated with these agents.

Some gynecologists and surgeons first used these agents to check hemorrhages from fibroids in order to bring the patients to safe operative risks.

Our first patient, on whom we used this method, was forty-two years of age with large fibroid the size of a four months pregnancy, who had been having such severe hemorrhages that she had a very marked secondary anemia with hemoglobin of 30%. We advised her that we would use radium to attempt to get her in better condition so that we might perform a hysterectomy safely. After the first radium treatment she had no further hemorrhages, the tumor has entirely disappeared and uterus seems normal in size. She has recovered in health, gained weight and is entirely well. Since then we have treated many such cases with uniformly good results and now are only operating upon firm, multiple, nodular, fibroids or for tumors larger than a five months pregnancy, or on those causing pressure symptoms, or when they are associated with inflammation of the adnexa.

The menopause following the use of radium, is usually not followed by as severe re-action as after hysterectomy or after the use of X-ray.

Although the operative mortality for fibroid tumors, in ours as in most clinics, has been reduced to almost nil, we are convinced after a careful and complete diagnosis, that in properly selected cases, radium has a very large field in the treatment of this disease. From our own observation, that radium is more preferable than X-ray in these cases, although many careful observers have had good results with X-ray therapy. One great advantage of radium over the X-ray is the length of time for the treatments, a few weeks with radium and months with the X-ray.

METORRHAGIA AND MENORRHAGIA.

Both of these troublesome conditions very often with no assignable cause are usually promptly and permanently cured by one or two applications of radium. The dosage can be accurately controlled and many cases can be cured of these symptoms and in six months to one year menstruate in a normal manner. A diagnosis curetment always precedes the radium application.

SUMMARY.

Better results will follow our efforts in the treatment of cancer and other neoplasms if more correct and early diagnoses are made. We must educate our patients and the laity in the danger signals of cancer. We do not believe it proper surgery to do biopsies in suspected malignant growths unless we are prepared to immediately perform a radical operation.

The sooner we begin X-ray and radium therapy after a diagnosis has been made the better for the patient, although we frequently have to wait one or two days for a microscopical section. Team work, between surgeon, pathologist and radiologist is very essential and it will be very beneficial to all if they are present at the time of the operation, or examination to see the tissue involved and give their opinion as to prognosis, the best method or methods of treatment which should be added to the clinical record.

In localized cancer, surgery is still much the best procedure for most malignant growths; but with our increasing knowledge of radiotherapy, many superficial carcinomas or those occurring in accessible cavities will be better treated by the latter method or by a combination of methods.

Whenever possible patients should receive pre-operative X-ray therapeutics, while it appears that radiotherapy has a selective action in the cancer cell it will only be after years of experience in

the use of these agents and careful records and a very thorough follow up system, that we will be in a position to state the good results of radium and X-ray in lessening the mortality of cancer.
641 David Whitney Bldg.

THE PRESENT STATUS OF ABDOMINAL CAESAREAN SECTION IN MICHIGAN.*

ALEXANDER MACKENZIE CAMPBELL, M.D.,
F.A.C.S.

GRAND RAPIDS, MICH.

The world's conflagration has consumed the lives of ten million individuals, many of whom if alive today would be the fathers of children. The cradles of the world have been robbed and there never was a time in the world's history when the conservation of human life was more necessary than at the present time.

The general practitioner, who in reality is the obstetrician, should interest himself in every problem that concerns the saving of child life and the lessening of infantile and maternal morbidity and he can perform no nobler service than that of informing himself concerning whatever procedures will minimize the injuries to both mother and child in those cases where delivery "per via naturalis" is either unsafe or impossible.

For a number of years the writer has been convinced that by intelligent recourse to Caesarean section the lives of many babies and mothers that might have been saved have been sacrificed owing to a failure on the part of the physician to recognize the exact conditions requiring operative interference; however, on the other hand there has been a dangerous tendency to overdo this operation because of the ease with which the procedure can be done, because of its spectacularity and because the operator as a rule has looked upon the task as a surgeon and not as an obstetrician.

In 1913, we made an attempt to obtain statistics concerning the number of abdominal Caesarean Sections performed and the results obtained in this State during the ten year period just preceding 1913. In this attempt we wrote to 81 hospitals and enclosed a questionnaire in each case asking for the details as to:

- (a) Maternal and Foetal Mortality.
- (b) Time of operation relative to
 1. Setting in of labor.
 2. Rupture of membranes.
 3. Making of Vaginal examination.
 4. Use of obstetrical forceps.

In reply there were 87 operations reported. In these 87 operations 22 mothers had died and there were 25 foetal deaths, making the mortality of mothers 25.2% and that of the infants 28.8%. To the balance of the questionnaire the answers were unsatisfactory and no definite data could be obtained from them.

From these statistics, which were as accurate as could be obtained at that time two facts were definitely shown: First, that it was a lamentable fact that hospital records if kept at all, were kept so meagrely and incompletely as to make it impossible to obtain answers to more than one-half of the questions submitted; second, that a strong conjecture which the writer has held for a number of years was verified, namely, that the medical profession in this state had not acquainted itself sufficiently with the indications for and the technic of this operation, notwithstanding the fact at that time, that in certain of the larger clinics in this country and abroad the mortality has been reduced to from 2 to 5%.

Recently we thought it would be of interest to ascertain what progress had been made in the conduct of this operation since 1913. Accordingly we sent out a similar questionnaire to the one in 1913. We wrote hospitals and received reports covering 192 cases extending over a period of six years, viz: From January 1, 1914 to January 1, 1920.

The following statistics were obtained:

Number of cases reported	192
Maternal mortality	21 or 10.9%
Foetal mortality	26 or 13.5%

These percentages of 10.9 and 13.5 compare very favorably with the corresponding percentages of 25.2 and 28.8 from the 1913 figures. We believe also the percentages of the past six years correspond with the general statistics all over the United States.

In the analysis of the 192 cases as shown by the second question of the questionnaire the following facts were obtained:

Number of cases operated previous to onset of labor	85
Maternal mortality	5 or 5.8%
Foetal mortality	15 or 17.6%
Number of cases operated after onset of labor 91	
Maternal mortality	14 or 15.58% plus.
Foetal mortality	12 or 13.1% plus.
Number of cases reported with data too indefinite to classify	16

Of the 91 cases operated after the onset of labor 61 were operated with no other complications with the maternal and foetal mortality 13% plus and 11% plus respectively; 15 were

*Read before Section on Gynecology & Obstetrics, M.S.M.S., 1920.

operated on after rupture of membranes with a maternal and foetal mortality of 13% and 6.5% respectively; 15 were operated after definite attempts had been made otherwise to deliver with a maternal and foetal mortality of 20% and 40% respectively.

Of the cases operated 7 were done by the extra peritoneal method with one maternal death—the child living. These later figures indicate a marked improvement in the management of Caesarean section in the past six years. They show that the mortality both maternal and foetal has been reduced over 50%, and that the operation has been performed more than twice as frequently in the last six years as in the ten years preceding. The figures also show that hospital records are more complete and are being better kept, thus, indicating favorable progress in Hospital Standardization in Michigan.

One can state from these cases that the present statistics of abdominal cesarean section in Michigan show a maternal mortality of 10.9% and a foetal mortality of 13.5%. This mortality can and must be reduced. This reduction will only take place through a more critical study of the indications for and the technic of the operation.

As above stated in order to obtain these statistics we communicated with 137 hospitals but it is regrettable that some of the largest hospitals in the State were unable to furnish us any data whatever. Therefore, the information received was necessarily incomplete and the above figures do not entirely cover the number of caesarean section performed in Michigan during the stated periods.

It is our intention to pursue the study of this question in the near future when it is to be hoped that hospital records will permit a more thorough consideration of this subject as it may obtain in the State of Michigan.

631 Metz Bldg.,
Grand Rapids, Michigan.
Oct. 1, 1920.

DISCUSSION.

DR. ARTHUR S. KIMBALL, Battle Creek. In my experience in the last few years there have been eleven cases that have gone to the operating table for Caesarean section. While I am not an operator myself but am associated with a good man, our percentage has been 100 per cent recoveries from the standpoint of the mother. From the standpoint of the mother from other procedures there were two cases in a series of eleven; one case of eclampsia was operated on, on case was placenta previa, following operation five days she died of convulsions. There was no sepsis at all, and of all the route directly through the perineum two have contracted pelvis, three have placenta previa, three have malformation. In these the positions were such in two cases that if delivery were carried on it would have been fatal.

In both cases the shock would have been severe to the mother, and the shock to the baby would have been severe, and in both instances the best chance for both the mother and child was the Caesarean section and that was justified. The three cases of malformation had gone to operation three times previously, in which there was a relative, 66%, disproportion between the child and the mother. The cervix was high and the route, as delivery by the normal method, which they had gone through four times before, without a living child, was impossible, was the Caesarean operation and this woman went home with a living child, a male, the only heir in the family.

My own belief in the matter is that the shock following the high forceps delivery, provided there has been very little manipulation on the part of the mother, is greater than the shock following a Caesarean operation on a perfectly surgical technic.

DR. REUBEN PETERSON, Ann Arbor: I think this is a very timely paper. I must say that the statistics are pretty bad, but I wonder if it will not be well to publish them so that the profession of the State may have in their hands something to encourage them to do better work. Certainly, as shown by the table of fetal mortality, the indications for these operations were not very scientific, to say the least. Of course, once in a while, one will have a fetal death in a Caesarean section. One cannot always make a positive diagnosis of a monstrosity, or there may be some other deformity in a child which will result in fetal death. But the fetal death rate in abdominal Caesarean section should be very, very low, except when we are dealing with cases of the toxemia of pregnancy, or where we are dealing with eclampsia or something like that. To my mind, the striking fact in these figures is the high fetal mortality. We have all known that Caesarean section was being performed when it was contraindicated, but I think a paper like this which gives us certain facts will open our eyes still more to conditions in our own State. Of course, Dr. Campbell has only touched the subject. He says he did not get the statistics from Harper Hospital, and he did not get the statistics of many cases I know of. They could not possibly have been included in his figures, so this probably gives the results in the better hospitals and of the better operators, because I know men are doing Caesarean sections that have no business to do them, from the lack of training, and those patients are dying every day from the misuse of this operation. It is an easy operation to perform in comparison with other abdominal operations, but the mortality is high unless it is done under the very best conditions. Dr. Campbell's figures show, as have other figures, that when the membranes have ruptured the mortality increases until it assumes alarming proportions. In many of these cases undoubtedly the children were dead before the operation was undertaken and the woman would have had a better chance by having craniotomy and delivery through the natural channels, even when the indication was a contracted pelvis. I think we cannot refrain from emphasizing the fact that in any case where it is necessary, or it is thought it will be necessary to perform abdominal Caesarean section, that vaginal examination should not be permitted. If rectal touch be used, then we can approach that case with the assurance that we are dealing with a non-septic uterus.

To show you how some men of good repute, men who should know better, look upon this question of abdominal Caesarean section, I want to mention a paper that was read before the New Orleans meeting of the American Medical Association, in the section on Gynecology and Obstetrics. Here was a man who advocated in the presence of acute appendicitis the opening of the uterus prior to the removal of the appendix, so as to reduce the size of the uterus and

make his removal of the appendix easier (laughter). If there is anything that could be worse than that in the presence of appendicitis, to open the uterus first, I do not know of it. He got away with the case, but we all know that in cases in which we make blunders and do rotten surgery the patient lives by the grace of God and not from what we do, and to advocate such a procedure as that was the most astonishing thing I ever heard of. In my travels abroad I saw the rottenest abdominal Cesarean section it has ever been my privilege to witness, and that brings up what Dr. Campbell has said in regard to the closure of the abdominal wound. I saw men put in interrupted sutures through the uterus about an inch apart and when they got through the preitoneum was not half approximated. If we have learned anything we have learned to get good results by using the Tier suture. Of course, as Dr. Manton has said, that may be overdone, we may put in too many sutures, but the poor suturing of the uterus has been the cause of many of the ruptures that we hear of following Cesarean section.

I would call attention to a number of indications which Dr. Campbell did not speak of because his time was so short. I believe that if a woman, for instance, has had a complete laceration of the perineum with a vesico-vaginal fistula, and if it has taken a number of operations to restore her to physical and functional health, with the scar tissue that is in that vagina, it is folly to subject her to another delivery by the natural passages. In a number of instances I have had those were indications for abdominal Cesarean section. I can only emphasize what I wrote to Dr. Campbell. It seems to me that if we can make a diagnosis of central implantation we have the best interests of both mother and child in mind when that woman is delivered by abdominal Cesarean section. Those of you who have tried this and compared it with any other method of delivery for a woman with placenta previa will be astonished with the ease with which the operation can be performed and the safety for the mother and child. Ultraconservatism has stood in the way of doing the Cesarean section before delivering the child from below. One should be able to save both the mother and child.

This is such an interesting subject and so many points have been brought up that one could talk all afternoon. I can only say in regard to the questionnaire sent out by Dr. Campbell that he is correct in his conclusion that there has been improvement, and there will be more improvement since the College of Surgeons has taken up this question. But perhaps Dr. Campbell has not realized one thing, and I will call this to his attention. I was exceedingly interested in what he was trying to do. He sent out the questionnaire in January. I received one in connection with my private hospital and proceeded to give him the statistics not only of the private hospital but of the University Hospital. I sent him these and I received the questionnaire from the office of the general hospital sometime in April. Where it has been in the meantime I do not know. It may be that the superintendent of the Harper Hospital still has this questionnaire in his files and has never sent it to the staff. One must remember that in a research work of this kind you have to keep eternally at it. If you send to the hospital, certain hospitals, it will get lost. If you write to a friend and say, "Give me your cases of Cesarean section, I wish to include them in a list," you will get better results. But I think Dr. Campbell has quite enough cases to make an exceedingly valuable contribution.

DR. ARTHUR RAYMOND MOON, Detroit: I am glad these statistics were brought to our attention this afternoon. I think we should institute a campaign to reduce the mortality in obstetrical work, and I wish the statistics might be shown before the surgical and medical sections. If the records from

some of our better maternity hospitals were shown the mortality would not be 10 per cent from Cesarean section. One reason for this high mortality is the fact that many men who are doing obstetrics are not interested in the subject. While most of the cases they see are normal, every now and then an abnormality presents itself and there seems to be some indication for interference. Attempts at high forceps delivery are made, with failures, and then a general surgeon is called in to do a Cesarean section, without weighing carefully the indication and contraindications for such a procedure. If frequent and careless attempts have been made at high forceps delivery perhaps we should do more craniotomies, as Dr. Peterson has suggested. A similar survey was made by a man in Boston some time ago and his records show a terribly high mortality for men who do Cesarean section in and around Boston. Would it not be well to start a campaign here in Michigan to reduce the maternal mortality in this State? In the last twenty years the mortality has not been reduced in obstetrical work. A few years ago we were having a high mortality in appendicitis but that is not true now because men have been educated to operate within the first twenty-four hours, if possible. Men should now be educated to weigh carefully the indications and contraindications for high forceps delivery and Cesarean section. If it is impossible for anyone to determine absolutely the indications for such an operation, it would seem advisable to summon counsel before any attempt whatever was made.

DR. WARD F. SEELEY, Detroit: There has been a good deal of discussion in regard to the lack of statistics in Harper Hospital. To my knowledge the chief of staff did not receive Dr. Campbell's questionnaire at all. I told them in time. During 1919 there were ten Cesarean sections done in Harper Hospital, without maternal or fetal death.

DR. C. E. BOYS, Kalamazoo: I would like to ask if the Doctor would assume to differentiate between the cases that are markedly toxic and those that are done for contraction of the pelvis. The toxic cases die anyway and it seems hardly fair to blame the operation for what is really due to toxemia.

DR. ALEXANDER M. CAMPBELL, Grand Rapids. (Closing): I feel that this very meagre paper has been worth while from the discussion it has aroused. No one realizes any better than I the paucity of the statistics, but I hope to follow up the work. I appreciated the statistics I did receive, and the very complete ones from some hospitals. I based my percentage on the statistics I received. I hope to be able to follow this up and have this report just a commencement of the work. I wrote to the Harper Hospital and received a letter saying that they could not furnish me with any statistics. Then I wrote to the chief of staff and received no reply. Then I wrote to Dr. Seeley, who said he would do what he could, but the statistics were not forthcoming. I think the more details we can give in the work, the better.

The main point I wish to bring out is this: that as a profession, in Michigan, we are not handling these cases as efficiently as we should. There are many surgeons doing Cesarean section who are good surgeons but poor obstetricians. Any campaign that will increase our knowledge of this subject, I think is worth while.

THYROID GLANDS—METASTASIZING EFFECTS.*

ANGUS MCLEAN, M.D., F.A.C.S.
DETROIT, MICH.

It has been reported by the *Swiss Military Surgeons*, that over seven per cent. of the applicants for military service in the Swiss Army

*Read before the Mississippi Valley Medical Association, Louisville, Ky., October, 1919.

have been rejected from service on account of goitre or some disease of the thyroid gland.

In our late war, the Examining Surgeons, of Michigan reported that over four per cent. of their rejections were on account of goitre, or some disturbance of the thyroid gland. From this report it may be said that Michigan can be considered as being in an active part of the goitre belt or area, of the United States, considering the State's location in the center of the



Showing thyroid metastasis into head of femur (benign).

Great Lake District. I think it may be said to be the center of the goitre area of the United States.

We have a number of goitres of different types, usually with an hereditary history; also cases of congenital hypothyroidism or cretinism. Just what is the cause of goitre, has not yet been settled, but it has been noticed that in cases of cretinism, one or both parents had diseased or inefficient thyroids. Children born in certain localities, are more susceptible to goitre than others.

I saw a young boy, six years of age, about a month ago, who was a typical hypothyroid case. He had over-growth of the muscular and subcutaneous tissues. He was inefficient mentally and had all the characteristics of mild cretinism. There are three children in the family, an older sister and a younger brother. The father and mother seemed perfectly well and had normal thyroids as had the other two children. This boy was born in a different locality from the other two children, his parents, having lived in this locality about two years, preceding his birth and one year after. It would seem from this, that the locality, the soil, the water, or these several factors combined, had some

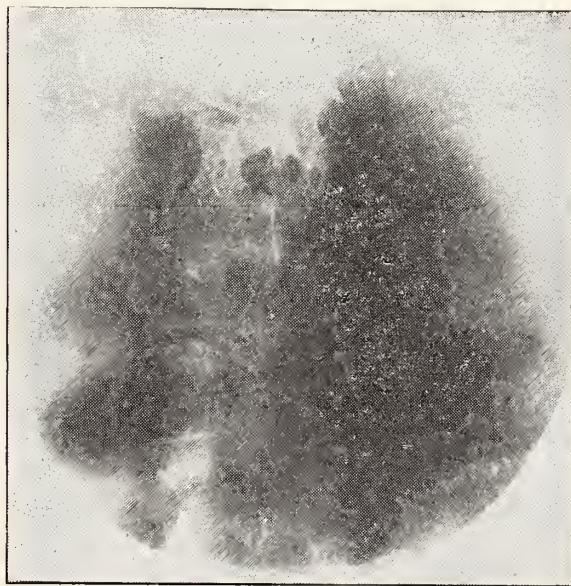
influence upon the development of the embryothyroid.

It has long been known that we have metastasis of the cells of the thyroid gland, or some of its contents, to other tissues of the body.

In 1837 Caeser Hawkins, reported cases of cancer of the lung, following cancer of the thyroid Pitel, and others reported cases of thyroid metastasis of non-malignant type in bones, such as the vertebrae, pelvis, jaw and the long bones.

Several cases of metastases into the lung have been reported and demonstrated by the X-ray. Reidal, removed a tumor from the inferior maxilla, composed of normal thyroid tissue, which recurred locally after a period of ten years. The thyroid gland remained normal throughout this period of observation. It has also been thought that metastases of the thyroid tissue cells, have taken place from aberrant thyroid glands. It would seem from this, that cells may be dislodged from normal thyroid, and carried to other organs by veins or lymphatics.

Tumors have been removed from the region of the shoulder and neck, which have been



Showing thyroid metastasis into lumbar vertebrae (Malignant)

thought due to metastasis of thyroid cells, but this was probably aberrant thyroid tissue, that later, began to develop. Thyroid tumors, which are of a benign nature, may be found in most any portion of the body. They have been found in the skull, vertebrae, liver, lungs, spleen, etc.

Simple colloid goitres present a structure that usually remains harmless for years, although they may give rise to metastatic tumors of a benign or malignant type. This is one of the anomalies of the pathological thyroid. These metastatic tumors being similar

to the original thyroid and in most cases containing colloid material.

Aberrant thyroid tissue or aberrant glands have been known to take on an active development similar to the thyroid in hyperthyroidism, having the bruit and throbbing of an aneurism. These having been found behind the sternum or clavicle and diagnosed as aneurisms. Surgeons have applied ligatures for their cure. It is known that this aberrant gland tissue may take on the character of Graves disease, producing a chain of symptoms similar to those found in the thyroid gland, in its normal position. A few of these have been reported.

Thyroid glands are subject to malignant growths, like many other tissues, and are the seat of different types of carcinomata and sarcomata. One or both lobes may become infected afterwards becoming very hard and resembling sclerosis; they become very firm and clinically resemble malignancy of the glands. Accompanying this type of infiltration, there appears to be an excessive amount of secretion taken up by the circulation. Patients suffering from this malady present many symptoms of Graves disease or exophthalmic goitre.

Sarcoma at one time was thought to be rare, as a primary malignancy of the thyroid, but Ewing reports in his work that Erhardt collected one hundred and fifty carcinomas and ninety-nine sarcomas. Ewald's statement shows a proportion of about three or four carcinomas to one sarcoma. Sarcomas occur chiefly after forty years of age, and about equally in both sexes. An hereditary tendency and a history of previous goitre is very common. The sarcoma grows very rapidly and metastasizes rather early. They metastasize chiefly through the veins, and may be of any variety. That is, round celled, spindle, mixed, aveolar or fibrous. The round celled type, being most numerous. While many sarcomas have been reported, it is believed by many pathologists, that the majority of these tumors are of epithelial origin. Areas of round or spindled celled sarcoma have been found in carcinomatous goitres.

Carcinoma of the thyroid is a disease of later years, the majority appearing in the decade between fifty and sixty years of age, but may be found anywhere between the age of ten and ninety. In the great majority of cases carcinoma is secondary to some diseases of the thyroid, which has been present for some time. Ehrhardt gives a previous history of goitre in this type of malignancy as having existed from

one to fifty years previously before its manifestation. The average time, being two years. These metastasize mostly through the blood vessels, although there are some cases where they followed the lymphatic ducts and nodes or both.

Occasionally the original tumor remains small, while metastasis develops; and in a few cases the thyroid has been overlooked until the effects of the metastasis have been discovered, in the lung, bone or other tissue. I will show a slide in which the malignancy of the thyroid was not looked for until after an X-ray had been taken, and the metastasis pointed out; also a slide showing a non-malignant metastasis in the head of the femur. Simple colloid goitres that have remained harmless for years, may give rise to metastatic tumors, either benign or malignant.

The structure of colloid goitre may be found in both primary and secondary tumors. In some instances, tumors of thyroid tissue have developed under circumstances which suggested an origin from aberrant cells. In rare cases, the thyroid tumor remains small and unnoticeable, the first intimation of serious trouble is the detection of a metastasis in the pulmonary tissue or in bone. Those of the lung may be large or small and hemorrhage may be easily excited in this tissue; haemoptysis may follow.

Most any inconsistency of metastasis may be accounted for. The original trouble may be benign, where the secondary is malignant, and vice versa. This is probably shown best by the conclusions of Jaeger, which are as follows:

1. Both the primary and secondary benign.
2. Primary tumor malignant and secondary benign.
3. Primary tumor benign, secondary malignant.
4. Both malignant.

The pathological anatomical and functional disturbance of the thyroid glands are many and quite obscure; these peculiar metastasizing qualities are pointed out to demonstrate the secondary effects of the diseased thyroid.

Enlarged goitres of any hyperplasia produce a degree of mechanical or chemical irritation of the epithelial tissues, and this irritation later may be the cause of a malignancy. Therefore all goitres of this type, should be attended to, for when treatment is long delayed, a percentage of these are followed by cancer.

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December

Editorials

AT CHRISTMAS TIME

*"Sheathed is the river as it glideth by,
Frost-pearled are all the boughs in forests old,
The sheep are huddling close upon the wold,
And over them the stars tremble on high.
Pure joys these winter nights around me lie:
'Tis fine to loiter through the lighted streets
At Christmas time, and guess from brow and pace
The doom and history of each one we meet,
What kind of heart beats in each dusky case;
While startled by the beauty of a face
In a shop-light a moment, or instead,
To dream of silent fields where calm and deep
The sunshine lieth like a golden sleep—
Recalling sweetest looks of Summers dead"*

—Smith

With ever seeming quickening pace, the holiday season o'ertakes the last and almost unaware do we find ourselves in the midst of its festivities. This is the eighth occasion upon which it is again our responsibility and duty to convey to our members and readers the Christmas Greetings tendered to each other and to transmit a sentiment of good-will and good-cheer. Rapid as has been the passing of the year, occupied as we have been with the

affairs of our individual concern, restless though we have been through the threatening manifestations of civic and social life—we are again privileged to enter into the holiday season, pregnant, as it ever has been, with a spirit and sentiment capable of stilling the restlessness within and potent to allay the grievances and differences that may have arisen between fellowmen. In brief, to take on and reflect the spirit of peace and good will.

Whatever may have been our lot this past year, whatever may have been our fortunes or misfortunes, the wish that predominates is that this holiday season may through its spirit and influence inculcate in all the true reflection of peace and good will—that sinned against and sinning may bury their differences beneath the holly bough. Such is the greeting conveyed in our Merry Christmas wishes.

TUBERCULOSIS CLINICS.

The October issue of Public Health contains the following announcement and plea.

For the purpose of centralizing the work in prevention and cure of tuberculosis and for obtaining the highest degree of co-operation with the inhabitants of the state, the Michigan Department of Health assumed on July first the conduct of the clinics for tubercular patients which had previously been under the direction of the Anti-tuberculosis Association. The first duty will be the thorough co-operation with the local organizations of the American Legion, the Red Cross, the Michigan Community Council Commission and other county or city organizations in any of their work which will affect the welfare of citizens and especially former service men.

In connection with this work the bureau of communicable disease has written every physician in the state, endeavoring to secure an accurate survey of all cases of tuberculosis among ex-service men and their families.

This might be called the vanguard work of the Department. In addition there is a corps of trained field workers which recently started work in Lenawee County. Within a year the Michigan Department of Health hopes to have established a tuberculosis clinic in all of the 83 counties of the state. But at first the corps is covering only those counties which already have some local organization or visiting nurses that may be able to carry on the work after the clinic and reports are made.

As can readily be seen, it is absolutely necessary that some definite organization is estab-

lished in each locality to follow up the work done by representatives of the Michigan Department of Health. For there are always a number of cases needing immediate medical attention and steps must be taken to protect others from possible infection.

Offering a city or county this free service, under the joint auspices of the Department of Health and the local community betterment organizations of one nature or other, serves as a comprehensive educational program, impressing everyone with the need of periodic physical examinations.

Only by taking care of every incipient case of the disease will Michigan materially cut down her yearly increment of new cases. This is where the importance of the children's clinics, held in connection with the regular tuberculosis clinics, is stressed. Under the direction of Dr. Rose the children's clinic is designed to discover and advise treatment in case of diseased tonsils, adenoids, bad teeth, glandular trouble, mal-nourishment and anemia. Any child found to be below normal physically is referred to the tuberculosis department of the clinic for examination by Doctor Ramsey.

In the first place, in preparation of establishing a clinic, letters are written to local physicians. Co-operation of physicians is especially desired and needed. The Department of Health wishes to assist them in any manner possible and they are always invited to bring to the clinic any of their private cases for consultation free of charge. A copy of the physical findings of every case which passes through the clinic during its stay in a city is sent to the local doctor whose name is given by the person examined as the family physician. A duplicate copy is kept on file by the Department and another one is left with the local organization for follow up work.

In order to get an announcement of the coming of the free health clinic before all school children in the community a letter is sent to the various public school teachers announcing the fact. Then at least a week preceding the arrival of the clinical corps of the Department posters are displayed throughout the county with active publicity in county papers. Movie slides announcing the coming of the clinic are also employed to get the dates fixed in the public mind, while other announcements are made on the previous Sunday in the various churches.

A daily report of the work at each clinic is sent to the Department of Health. This report gives the number of applicants for examination, men, women, boys and girls; the

number of positive tubercular cases, and suspected cases; physical defects; the number of physicians calling and the general interest shown by citizens in that district. In connection with the holding of the clinics there has sprung up in some communities a practice which the Department commends highly. This is the innovation of holding a general "Health Week" to create popular and proper interest in health work. Arrangements are easily made for meetings of men's and women's organizations or of a group public meetings, any of which both Doctor Ramsey and Doctor Rose are always glad to address.

Just as the Department of Health is organized for the service of the entire state, so the traveling tuberculosis and children's clinics are maintained for special service in communities in detecting of tuberculosis and children's diseases and for the purpose of aiding in their prevention and cure. Local authorities should ask for more and more service from the Department.

The Michigan Department of Health asks for the continued and renewed co-operation of all public, private, philanthropic welfare agencies, such as county tuberculosis society, county Red Cross, Women's clubs, Farm Bureaus, Granges, churches, lodges, public officials and particularly the press.

TO MAKE MICHIGAN FIRST IN HEALTH.

The Journal of the Michigan State Medical Society in its lead editorial of the October issue in commenting on an article *Public Health*, published by the Michigan Department of Health, which related to the state's high communicable disease rate made the following statements:

"We do not believe that 'taking a look' at these figures will improve conditions. Neither can it be expected that steps to reduce the number of these diseases will be successful if individuals or scattered groups of individuals in various parts of the state determine upon and institute varied methods for combating these incidents of disease. What is needed is a state-wide movement, definite methods—in brief a uniform campaign of action. We suggest that in 'asking us to look,' that the Commissioner of Health should not stop there and complacently expect results. We want a plan that is state-wide in its scope."

The Michigan Department of Health appreciates this opportunity to present to the medical profession in Michigan the Department's plan of uniform action to combat disease in this state,

be able to co-operate efficiently and scientifically with practicing physicians and the Department of Health. It is not necessary to dwell upon the desirability and superiority of such a plan over the haphazard system now in use. Any intelligent layman, or any physician, can see its merits. The county unit health officer system will be composed of large enough divisions to function properly; the township health officer plan is fundamentally inadequate.

a program which we believe would "Make Michigan First in Health." If the program is to be effective we must look for the hearty support and co-operation of every physician in Michigan.

Briefly the Michigan Department of Health's plan of state-wide scope is this:

1. A full-time, qualified medical man for health officer in every county of the state, to be chosen by county officials from a list of men whose qualifications have been approved by the Michigan Department of Health.

2. Transfer of the Bureau of Vital Statistics to the Department of Health.

3. Adequate laws to control stream and lake pollution, and sanitary conditions at Michigan resorts.

4. Rulings whereby plans of municipalities for additions to, or installation of, systems for water purification and sewage disposal would be approved by the Department of Health before work is begun.

5. Free and unlimited distribution of anti-toxin and other specific biological products.

6. Extension of laboratory service to include branch laboratories in various parts of the state, and subsidy of existing city laboratories to take care of diagnostic work.

Under the present system Michigan has 1,600 health officers. Some of them are qualified medical men; many of them are only part-time health officers; and 800 of them are laymen with no experience in public health work. The present system endeavors to provide a health officer for every township, but on account of the small amount of pay which accompanies the office few physicians care to take the office—a public job which requires considerable time and effort which the ordinary doctor cannot spare from his practice.

In fact, we believe that a full-time, qualified health officer for each county would remedy unsatisfactory existing conditions. Such a health officer would be able to adequately supervise quarantine, reporting, and releasing of cases of infectious diseases in his respective county; he would be able to look after rural sanitation and inspection of school children; and he would

Turning to the Bureau of Vital Statistics we see that this Bureau is under the supervision of the Department of State and that its work is not correlated with that of the Department of Health. Its records are compiled primarily for legal use rather than for public health use. Yet the officials of the Department of Health are, in the main, the only persons using the records of the Bureau. Through no fault of the Director of the Bureau of Vital Statistics monthly reports are not available until the latter part of the succeeding month, or too late for public health use.

Each summer Michigan plays host to millions of visitors who spend their vacations at her resorts. In fact, the resort industry is about the second largest business in the state. The typhoid fever rate in Michigan, however, is largely due to insanitary conditions existing at various summer resorts. Full-time county health officers should be able to cope with this problem of sanitation, especially if aided with adequate laws on lake and stream pollution and sewage disposal. Under the present system where "scattered groups of individuals in various parts of the state determine upon and institute varied methods for combating these incidents of disease" this is impossible.

The free distribution of anti-toxin would do much to curb the high death rate from diphtheria in Michigan. Too often now the family of a person sick with diphtheria delays—on account of the expense—the administering of anti-toxin until too late. Combined with the Shick test (and the taking) of throat cultures of children just previous to the opening of school, the free distribution of toxin anti-toxin for immediate use in every case susceptible to diphtheria would materially cut down the incidence of the disease.

Finally, the extension of laboratory service to include branch laboratories in various parts of the state is absolutely necessary for rapid diagnoses. The delay caused by having all the State's work done in the central laboratory at Lansing is too great for satisfactory work in all communities. Its functions are confirmatory diagnosis, diagnosis where the time element is not important, and assistance in the field in the case of epidemics.

This is our plan, the Michigan Department of Health's plan, a plan arrived at after consultation with numerous physicians and public health men throughout the state. We believe that it will do much to alleviate suffering in Michigan, to cut down the high morbidity and mortality rates—to "Let Michigan Lead in Health."

Guy L. Kiefer.

Editorial Comments

We are forced to recognize that there exists a wide spread spirit of apathy amongst medical men regarding their relationship to the individual and to the state. Here and there, with ever increasing numbers do we find a few doctors who are independently so conducting themselves in regard to state and social medicine that it becomes clearly evident that their chief concern is their personal interests. They have but little concern for their fellow practitioners, they do not stop to consider the future of others, they are solely interested in getting both feet planted in the trough and soaking up that which socialism may grant them as a sop. Would that we had the gift to fire an awakening shot that would cause our rank and file to realize the danger that surrounds them. Our past preachments seem to create but small enthusiasm.

We have read and heard of a number of non de plumes for the various specialties but none appear to be so appropriate in their terseness as the one heard the other day in which the proctologist was referred to as the "Rear Guard."

We are told that the cost to a company carrying automobile insurance is but thirty-six cents out of every dollar paid as premium for a policy. Or that the company makes a profit of sixty-four cents on every dollar of premium charged. Now that practically every doctor drives an automobile and protects himself against accidents by insurance and knowing the rates that are charged we have been wondering why it wouldn't be a good plan to add automobile liability protection as a membership benefit. We anticipate that our efficient Dr. Tibbals would welcome directing another legal feature of our society.

It becomes imperative that we once more direct our members' attention to the necessity of patronizing our advertisers. Deficient advertising revenue means either additional increase in dues or an inferior publication. Advertising contracts cannot be secured or renewed unless the advertiser receives just returns upon his copy. These returns must come from our members by patronizing our advertisers. We again urge that each member convey his patronage to those who use our advertising columns. Give them preference when ordering and let them know why you are doing so.

Well, let's hope we are really on the downward path in the cost of everything. It sure has been some year of inflation in prices. Our November issue cost us over three times what our January, 1920, issue did. Financially the Journal has been a heavy loser and unless a break comes soon we are due for an increased subscription price.

Now that you know who are the senators and representatives from your county we urge that you cultivate their acquaintance. The Legislation

Committee and the Committee on Civic and Industrial Relations are going to call upon each county society to exert their every possible influence upon these members of our State Legislature to defeat undesired legislation upon certain bills that deal with Compulsory Health Insurance, Health Centers so-called and cult legislation. If these bills should pass, you have only yourselves to blame. So get busy.

From representations that are made from time to time there are apparent reasons that tend to cause one to conclude that the Clinical Service of our University Hospital is not being conducted with full consideration to the profession's best interests. Rumors of varied type float about the state including some bitter criticisms. We feel that they foretell possible future dissention. It is therefor urged that to maintain a feeling of harmony and to prevent an open rupture between the profession and the University's medical department that a conference should be called. This conference to be composed of representatives of the University and of the profession. A pronouncement of what the scope of activity and development of the Medical Department should be imparted and then if their plans trespass upon the best interests of the profession, let there be brought about a harmonizing compromise. In so doing there will be avoided contentions and differences. Likewise will there be put an end to varied rumors. Those at the head of the Medical Department and the Hospital of our University owe such a course to the profession and must recognize that a spirit of cooperation must be sought. It cannot be expected that passive submission will ensue a policy characterized by dictatorial tendencies and wholesale disregard to the interests of the medical men of Michigan. We trust that such conference will be called, for by doing so the rumor that certain members of the Medical Department have said, "To H— with the State Profession," will be discredited. We invite our members' opinions in regard to such a conference.

For some time the National Anesthesia Research Society has been directing part of its efforts toward securing an appreciation among the profession of the need of trained and skilled anesthetists. In addition they have sought to point out that the administration of an anesthetic was more than "pouring on the dope." The society now presents the profession with a carefully devised anesthesia record chart, which if employed will do much to induce the administration of a careful, safe anesthetic. We have previously commented upon the need of anesthesia specialists. We are refraining from further comment. However, we are publishing this ideal, perfected anesthesia record feeling that when surgeons require their anesthetists to record their work and the patient's condition during anesthesia upon this chart that then another long step has been taken to obtain safe, skillfully administered anesthesia.

ANAESTHESIA RECORD

Flower

Hospital

Cleveland

City

Ohio

State

No. 210

WARD C

DATE

9/10 - 1920.

NAME

Sarah Jones

AGE 60

SURGICAL RISK

A
B
C

✓

OPERATION PROPOSED

Wertheim operation for carcinoma ut.

PHYSICAL FINDINGS NORMAL EXCEPT

Surgical condition

PRELIMINARY HYPNOTIC

Morphine & Hyoscin

DOSE

1/6 - 1/150

TIME OF ADMIN.

7 AM.

HOUR { A.M. 8:
P.M.

15

30

45

9

15

30

45

10

15

30

45

DOSAGE

SKIN

PUPIL

N₂O 93

E 3 IV

N₂O 90

O 10

Dry

small

small fixed

moist

N₂O 89

Perap.

180

160

140

120

100

80

60

40

20

0

REMARKS

A
Tracheal position O
Ether added
Large abd. pads.
Ether turned off
Increased subcut.Uterus out
Cauterizing

Uter. packs out

Readings 1/2 hr later

CODE: • PULSE ○ RESP. ✓ B.P.

ANESTHETIC

Nitrous oxid-Ox. Ether

TECHNIC

Combined

AMOUNT

E 3 IV

SURGEON

C.W. Smith

ANESTHETIST

A.L. Brown

OPERATION

Wertheim operation for carcinoma uterus

REGAINED CONSCIOUSNESS AT 10:55 AM O'CLOCK

Satisfactory narcosis

VOMITING

NONE
SLIGHT
EXCESSIVE

CIRC. DEPRESSION

1ST
2ND
3RD
SHOCK

CONVALESCENCE NORMAL EXCEPT FOR

Dues for 1921 are \$5.00. County secretaries are again reminded of this so that they may be governed thereby when collecting dues for the coming year.

From time to time we encounter experiences that reveal the fact that many doctors are totally ignorant of the customs and courtesies of medical journalism and organizational privileges.

Unless otherwise arranged, a paper that is read before the State or County Society is considered the property of that organization which has the privilege to designate in what if any publication the article shall be published. Some of the papers read at our State Meeting we note are being published in other journals. This is a flagrant insult and discourtesy.

A paper sent to a publication and accepted for publication should not be submitted to another journal for publication, unless joint publication is agreed upon. We have also had this discourtesy shown our Journal this past year.

It is customary, before an article is published, to send the author a galley proof for correction. Such galley proof contains a memorandum request, to correct and return by a given date. It is also noted that failing to do so the article will be published in a certain issue with only editorial corrections. Several authors fail to return the proofs sent them until long after the time limit set or the issue is published and then complain because the article appeared without their corrections. It should be remembered that a time limit must be set in order that the Journal may be sent out on the first of the month, therefore galley proofs should be returned promptly.

Reprints are gladly furnished at actual cost. Requests should be made for reprints when galley proofs are returned. The articles are not kept in type after an issue is run off the press. Consequently we cannot furnish reprints if the request for them is not received when proofs are returned.

On account of the almost prohibitive cost of printing we are receiving only fifty copies of each issue in excess of our actual mailing list. These extra copies are for the state files, advertising agencies and contracts. We are consequently unable to supply requests for additional copies of any issue unless such request is received before we go to press.

Original articles submitted for publication must be typewritten and should contain the authors name directly under the title thus:

Goitre: Operative Indications.

John Doe, M.D.

Detroit, Mich.

and not:

Goitre: Operative Indications.

By

Dr. John Doe

Member of Etc., Etc., Etc., Etc.

Detroit.

Nor should the authors name be left until the

end of the article. It should appear directly after the subject.

These comments and suggestions are set forth for our members' information and guidance.

Some adverse criticism has come from a few hospital superintendents and from those who are at the head of the nursing profession because our State Society went on record favoring a reduction of the time required for undergraduate training. What we would like to ask is: Are nurses supposed to be trained to be equal or superior to a doctor or are they to be trained to become a doctor's aid or helper? The tendency seems to be that a nurse should assume a dictating attitude and that consideration for her should supercede the interests and welfare of both patient and doctor. It is very apparent that the efficiency of the present day nurse, the practical training she receives in hospital training schools, her value in the treatment of a case and the nurse's ability and dependability is a third, if not a half, less than it was five years ago. The graduate of today, her attitude, her preparedness, on the whole, is not comparable to her sister-nurse of three and five years ago—of course there are exceptions. The fault lies at the door of training school officials and supervisors. The time is at hand when a reform must be instituted. We as doctors deem it imperative that the revampment be speedily instituted by those responsible for present day conditions.

This issue contains the index for the current volume which is concluded with this number. We have every reason to feel proud of the original articles that are contained in this volume. We do urge, however, that the ensuing volume shall include more clinical case reports and therefore solicit their contribution.

Again, but sincerely—A Merry Christmas.

Correspondence

Editor:

The November Journal arrived today, and not being overly busy I hastened to read the editorials, and before it escapes my memory I want to congratulate you on the excellency of your writings, the portion regarding advertising the standing of the modern physician, and his achievements, I consider more than timely, many a time I have thought that some way should be devised to acquaint the laity with facts as to the education, training, and equipment of the present day physician, and his fitness to administer to their ailments compared to the so-called, long experienced family physician of our "Boy-hood" days, and you certainly struck the nail on the head, and, voiced my sentiments much better than I could ever dream of being able to do.

I wonder however, how much of these editorials were inspired by watching my peaceful countenance while asleep, and you parading around the room like some caged, south African

jungle beast, gosh how you must have suffered by being compelled to occupy your room with such a sleepy head as I.

Again allow me to shower flowers while you are able to appreciate them.

K————.

Deaths

Benjamin Robinson Schenck eminent gynecological surgeon, was born in Syracuse, New York; August 19, 1872, the son of Adrian A. and Harriet (Robinson) Schenck. His ancestry dates back to the Holland Schencks in unbroken line to the year 1346. His remote Holland ancestor was Heinrich Schenck van Nydeck; the first American ancestor was Roelof Martense Schenck, born in Amsterdam in 1619, who in 1650 came to New Amsterdam, and settled in Flatlands, Long Island, and married, and died in 1704.

Rulef Schenck VI (1776-1852) was born in Freehold, N. J., in the year 1776, and from him our Dr. Benjamin is descended. The latest scions of this remarkable family are thus able to trace their lineage back for twenty generations. Benjamin Baird Schenck VII (1809-1883) the grandfather of our own Dr. Schenck was a physician, who moved up into the Southern part of New York state and studied in Geneva Medical College, receiving his diploma February 10, 1835. Dissatisfied with the often vague and always heroic methods of "the old school" he turned to Homeopathy with satisfaction, and became a bright light in the fraternity. After a fashion not so rare in those days he also was ordained as a minister of the Gospel, in 1846. He studied Greek at the age of 53 better to understand the Bible.

Benjamin R's father, for whom he felt the deepest affection, was Adrian Adelbert Schenck VIII (1842-1909) who held sundry important political positions and built up a flourishing manufacturing business. He devoted much time to collecting data relative to ancestors, and accumulated a mass of material which his son Benjamin R. put in shape with most assiduous care, and a complete grasp of this always arduous and difficult subject. The outcome of these joint labors of father and son is a volume of 160 pages, entitled "The Descendants and Ancestors of Rulef Schenck. A genealogy of the Onondaga County Branch of the Schenck Family. By Benjamin Robinson Schenck, M. D., from Records and Notes Compiled by Adrian Adelbert Schenck, Detroit, Michigan, 1911." A coat of arms of the family faces the title page. This consists in a helmet in the center of a gold and silver scroll, surmounted by a coronet from which springs a half lion rampant; below the helmet is a second whole lion rampant on a black shield, both lions have fearsome tongues, and the tout ensemble is an impressive affair in these democratic days. This work is an impressive example of the minute

care and thoroughness with which our hero did all his work, for it is an orderly compilation of a vast mass of details, which to have any value must be absolutely accurate. Benjamin R. Schenck went to Williams College and took his degree of A.B. in 1894. He graduated in 1898 as M.D. from the Johns Hopkins University Medical School. He married Jessie McCallum of St. Catherines, Ontario, Aug. 1904; two children were born, Leila Marion (1905) and John Tyler (1907).

After graduation he became a resident on the gynecological staff of the hospital under Howard A. Kelley, from 1898 to 1903, being an instructor in gynecology from 1901 to 1903. His hospital term was divided into two parts, being an assistant from 1899 to 1902, and resident gynecologist (in chief) from 1902 to 1903.

His stay in the hospital was a time of great activity in various scientific problems, and his productivity was such that one cannot refrain from wishing that he had been able to continue longer under such fruitful conditions, untrammelled by the cares of building up a practice. He published then, "On refractory subcutaneous abscesses caused by a fungus possibly related to *Sporotricha*." Johns Hopkins Bulletin, Balto. 1898; p 280.

This piece of work, which constitutes a sort of a graduation thesis, is his most original contribution, and that by which he will be longest remembered, inaugurating up as it did a vast amount of literature within the next 15 years. The disease consisted in a series of very rebellious abscesses creeping up the arm from the right index and hand in a workman who had scratched his finger on a nail; when incised the abscesses discharged a gelatinous puriform material, which gave pure cultures of a sporotrichum on various media, and which soon died out in animal tissues. He was assisted in it by Dr. Finney, Dr. Flexner, and above all by Dr. Erwin F. Smith of the United States Department of Agriculture, who lent his expert knowledge in the determination of the probable genus of the fungus to which the branching mycelial, conidia-forming growth, isolated from the abscesses belonged. The classification could only be approximate as only a conidial form was found.

Schenck's work was thorough, scientific, and wholly satisfactory, leaving nothing to be desired, a model of its kind.

Four cases of calculi impacted in the ureter. Nephro-ureterectomy. Abdominal uretero-lithotomy. Vaginal uretero-lithotomy. J. A. M. A. 1901; this subject of ureteral calculi was a favorite one with him and he made many studies which never were published. With W. W. Russell he worked up an ovarian sarcoma springing from the theca externa of the Graafian follicle Am. Jour. Obs. 1902. Further fruitful studies during this period are these forty-eight cases of post-operative crural thrombosis, N. Y. Med. Jour. 1902; Relaxation of the synchondrosis of the symphysis pubis, following normal labor, treated by sutur-

ing and wiring Am. Med. Jour. 1902. An eighty-eight pound ovarian cyst in a woman seventy-seven years old, J. Am. M. As. 1903; Later he put out a study of the value of the phloridzin test and of cryoscopy for renal insufficiency J. Mich. State Med. Soc. 1904. Renal hematuria of unexplained origin, ceasing after nephrotomy, J. Mich. State Med. Soc. 1904, and Essential hematuria and mild grades of nephritis Surg. Gyn. and Obs. 1911, serve to show his abiding interest and expert skill in the urinary diseases of women.

No better example of a model clinical study can be found in our literature than his "Symptoms, Diagnosis and Treatment of Ureteral Calculus," Johns Hopkins Hospital Reports, X, 1902, of thirty-seven pages with a table citing all the cases operated upon up to date (some 101). The summary of the literature, and the analysis of the symptoms and diagnosis, and the various operative methods presents the scattered data clarified for all future workers in this difficult field. This was the date when the method of discovering calculi by passing a wax-tipped catheter up the ureter and recognizing the pathognomonic scratch marks was still comparatively new.

He settled in Detroit, Mich., in 1903, and remained there in active practice until he went to Colorado in 1916 in search of health, with his family. In Detroit he became a leading exponent of his specialty, and secured general recognition, not only because of his great skill, but perhaps equally by reason of his own sterling worth, and that imponderable something which endears some men more rapidly to all they meet. Schenck had this high spiritual quality to a remarkable degree; all who knew him loved him and none who ever met him forgot him. His industry was remarkable, and his honesty transparent.

He exercised because of these qualities a great influence on the medical fraternity of his state, enhanced by his position as secretary of the Michigan State Medical Society, and editor of the Journal of the society from 1905 to 1910. His editorial work and his business management during this period were most creditable. It also fell to his lot by virtue of his position to organize the state society meetings, always an onerous task.

The writer recalls well with what pride he showed him the new housing of the Wayne Coun-

ty Medical Society, with all its conveniences for library, and for laboratory work, as well as for society meetings. This was an outgrowth of an interest fostered in the Journal Club. The Medical Library also owes its excellent status to his brooding care.

He was gynecologist to the Harper Hospital, and consulting obstetrician to the Woman's Hospital, and Associate Professor of Gynecology at the Detroit College of Medicine.

He had a definite Christian faith and was a regular attendant at the Presbyterian church.

After removal to Colorado in quest of health life became one series of ups and downs, in which he never surrendered, but continued to labor on, interesting himself in fitting up houses for various parties coming to the Springs, in this way helping out the livelihood question, in spite of much physical infirmity. Few men are so lamented at their death and few will be so long cherished in the hearts of their friends, as he.

Howard A. Kelly.

The Roman numeral after the name signifies the generation in America.

State News Notes

COLLECTIONS.

Physicians Bills and Hospital Accounts collected anywhere in Michigan. H. C. VanAken, Lawyer, 309 Post Building, Battle Creek, Michigan. Reference any Bank in Battle Creek.

Wanted. Good Doctor to locate in small village. None here now. Little competition. For full particulars address, L. D. Capen, Millbrook, Michigan.

The Physicians and Surgeons Adjusting Association, Railway Exchange Building, Kansas City, Missouri, issues free membership certificates to doctors patronizing the Association's collection service. The idea is proving attractive to many doctors, according to F. F. Hoard, Controller, who says, "Merchants and others form associations for mutual protection against delinquent debtors. The Association provides much the same service for medical men." The Association's announcement appearing in another column is self explanatory.

COUNTY SOCIETY NEWS

It is the Editor's desire to have this department of the Journal contain the report of every meeting that is held by a Local Society. Secretaries are urged to send in these reports promptly

GENESSEE COUNTY

The Genessee County Medical Society met on Wednesday, Nov. 3rd, President Orr presiding.

In his inaugural address, President Orr urged the action of the Society to secure the standardization of Hurley Hospital. He spoke on the

need of closer co-operation between the specialist and the general practitioner in the matter of diagnosis, and made a plea for greater unity among medical men. He appointed a committee to meet with Hurley Hospital Board to make such changes as will make this Hospital conform with the standards of the American College of Surgeons. Dr. C. D. Brooks of Detroit spoke on "The Uses of Radium in Surgery." He insisted on the profession trying to make earlier diagnosis of malignancy. He spoke on the types of cases suitable for Radium treatment and showed the necessity of pre-operative and post-operative radiation, not only of the primary lesion, but of remote parts likely to be involved by metastases, especially the lungs, liver, long bones and spine.

W. H. Marshall, Secretary.

The Genesee County Medical Society met on Wednesday, Nov. 17, 1920, Vice-President Wheelock presiding. It was decided that the society adopt an insignia for physicians' automobiles consisting of a white cross on a red background. The committee on Hospital Standardization presented a report, with recommendations for the board of directors of Hurley Hospital. It is hoped that, as a result, this hospital will soon be recognized as a standard hospital.

Dr. Hugo Freund, of Detroit, gave a most instructive address on "The Medical Management of Hyperthyroidism." Of special interest was his elucidation of the value of Basal Metabolism tests in diagnosis and as a check on treatment.

W. H. Marshall, Secretary.

SANILAC COUNTY

The 20th annual meeting of Sanilac County Medical Society was held in the Court House, Sandusky, on Wednesday the 13th of October, 1920, at 1:30 p. m.

President, J. E. Campbell, called the meeting to order.

The following members were present:

J. E. Campbell, W. J. Scott, W. T. Atkinson, G. S. Tweedie, D. D. McNaughton, C. C. Bullard, J. C. Webster, C. E. Jeffery.

Applications of D. C. McLean, W. A. Giffin, S. Stephens for membership in the society were presented and upon vote being taken were unanimously received.

The following officers were elected:

President—J. W. Scott, Sandusky.

Vice-President—J. C. Webster, Marlette.

Secretary—C. E. Jeffery, Deckerville.

Medico-Legal—D. D. McNaughton, Axbyle.

Moved, supported and carried that all physicians over seventy years of age be made honorary members of this society.

Dr. D. D. McNaughton of Argyle gave a paper on abdominal pains, which was well received and elicited considerable discussion.

Dr. J. C. Webster of Marlette gave a talk on the technic of removing tonsils by the Sluder method which also called forth considerable discussion.

At a former meeting this society went on rec-

ord as unanimously opposed to the matter of Compulsory Health Insurance.

Moved, supported and carried that we adjourn. Next meeting to be held in Deckerville, date of meeting to be left to the decision of the officers.

Miscellany

ABSTRACT.

In the treatment of the criminal we have passed the stage of brutality and retribution, through the period of religious reformation, and we have now entered upon the scientific and humanitarian era in criminology. We no longer regard the convict as a demon-possessed unfortunate or the wilful and conscious chooser of evil but we do believe after science has pushed through the crust of orthodoxy and delved into the study of those forces which regulate his actions, that he is in a majority of instances mentally and physically defective, that his crimes are manifestations of pathological conditions due to defects of cerebral development or to acquired retrograde changes of the central nervous system.

The best method of treating any disease is its prevention. It is at once admitted that a large part of crime can never be prevented or abolished no matter how perfectly we may regulate human life. There are certain inherent tendencies in the human race, such as hate, anger, jealousy, combativeness, selfishness, etc., which are conducive to crime. It is easy enough to say from a theoretical standpoint that crime is dependent upon personal immorality and social degeneracy and if we suppress these two that crime will be eliminated.

In the psychopathological laboratories of our penal and reformatory institutions it has been shown that crime is largely dependent upon mental defect and it is certain if we can prevent the inheritance of mental defectiveness we can to a great extent prevent delinquency. It is within the power of the state to enact and enforce such legislation as will control to a great degree the manufacture of idiots, imbeciles, moral degenerates, epileptics, insane and syphilitics.

The three most important methods which are calculated to eliminate to a great degree the above mentioned classes are as follows:

1. The restriction of marriage to those who are physically, morally and mentally unfit to assume the duties of parenthood.

2. The segregation of the feeble-minded and more especially the females of this class within the limits of the child-bearing period.

3. The asexualization of the degenerate, defective habitual criminal and chronically insane. The laws of this nature are now being opposed because of the blind, alarmed and superstitious conservatism that is entertained by the public and also because of the almost perfect indifference of society in general to the social and racial welfare.

If society could be reorganized upon improved economic and political lines no doubt criminality would be greatly reduced. The reduction of poverty would reduce crimes against property to a very great degree and if better political relationship could be established between the government and the individual and between individu-

als, the number of crimes against persons would likewise be reduced. Before either of these reforms can take place, public education is necessary. The chief aim of education is to qualify the individual to secure the largest possibilities of life. Education will assist us in seeing the rights of others, the state's duty toward its citizens and our duty toward ourselves.

When the individual is untrammelled by evil birth, when poverty is prevented and economic ills corrected, when he will be given a well rounded education combined with a rationalized religion and intelligent conventional morality, when he is allowed to live a normal life in the pursuit of liberty and happiness, delinquency will largely disappear. We can not hope to eliminate the criminal or crime in the near future. In fact we will have some criminals no matter how perfect society becomes. The criminal is here with us. We must deal with him, as he is.

Treatment implies that we must make a diagnosis of diseases before we proceed with the medication and the same principles must hold true when dealing with criminality. The first changes to be made in our present methods relate to court procedure. Before the alleged criminal comes before the bar of justice he should be examined socially, physically, and mentally in a psychopathic laboratory, that his mental status may be determined. It should be one of the functions of the court laboratory to explain the motivation of crime in each individual case that equity may be practiced. Individualization of the treatment of the criminal can not be carried too far lest it undermine the social defense. Laws can not be made to fit every individual case by legislation. Some standards must be preserved but our courts should know the history of the criminal, including his heredity, education, occupation, previous criminal record and his condition of life, his mental status at the time of the commission of the crime and at the time of trial and the origin, character and intensity of his crime. When all this information is gathered together and presented to the court, the judge and jury will have a vast fund of information which will enable them to deal with the criminal more intelligently than at present.

Our prisons and reformatories in general are greatly in need of improved administration. It is gratifying to see that the official personnel of penal institutions has greatly improved in the last ten years but there is still opportunity for progress along these lines. The control of penal institutions should be in the hands of educated men, preferably psychiatrists, psychologists, sociologists or educators. An uneducated, illiterate, blindly prejudiced, political henchman can not grasp the first principles of scientific penology. He can not understand that a prison should be a moral hospital and an educational institution.

The penal institution should have a well organized medical department equipped to modern standards and officered by competent physicians so that it may render all the necessary medical service. Every prison and reformatory should have a psychopathic laboratory wherein the prisoners may be classified so that the administration may deal with them intelligently.

Work in itself not hard, becomes so by being pressed day after day with unrelenting monotony. For men who spend the whole of every day in the week in unrelenting toil, very little good can be done for them by one hour religious instruction on Sunday. There is need of mental and physical recreation.

One of the greatest advances made in the treatment of the criminal in recent years was the enactment and enforcement of the indeterminate sentence laws in the various states of the union. All sorts of arguments were brought to bear to prove that these laws were impractical and sentimental. The passage of time however has been sufficient to prove the falsity of these arguments. The indeterminate sentence laws are based upon the theory that they give the criminal the opportunity to choose between reformation and long imprisonment.

It will be necessary under the indefinite sentence laws to have a board of properly trained experts who are capable of judging when an individual should be returned to society. This board should be composed of the superintendent of the penal institution who holds his position by reason of the fact that he is qualified; an attorney, trained in the science of criminology; an alienist, trained in psychology as well as in medicine and who shall have had training in a prison as well as in a hospital for the insane; an educator, conversant with the problems of sociology, and the institution physician, who is a psychiatrist and whose intimate experience and observation of the criminal enables him to render valuable information concerning the applicants for parole. This board of experts should be a board administered by the state and known as the State Board of Parole. It should have no official connection with the penal institutions, except in case of the warden and physician and should be entirely removed from the influence of politics.

In the prison of the future the various classes of individuals will be identified, classified and properly segregated; the prisons will then cease to be simple, custodial abodes of those who have offended society, but they will become complex institutions, equipped with psychological laboratories, modern hospitals, schools of letters and manual training, sanitary workshops, where the prisoner will learn under kindly but firm discipline the truth of the scriptural injunction "In the sweat of thy brow, thou shalt eat bread," and that the privilege to live in extramural society shall depend upon the capacity to earn a decent, honest living at respectable labor. In brief our prisons must become moral, orthopedic institutes for the physical, mental and ethical rehabilitation of criminal man.

The authority of a penal institution must always remain in the hands of the officials of the institution. The prisoners of course are to be allowed certain privileges and liberties and given reasonable trusts within due bounds. If the penal institution gives its inmates a kindly but firm square deal discipline, there will be no clamoring among the prisoners for self-government.

(*Jour. of Delinquency*, Sept., 1920—Paul E. Bowers.)

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EDITOR

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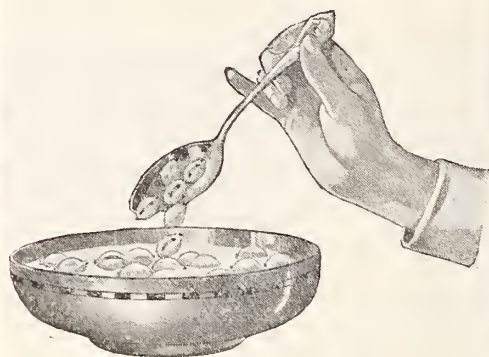
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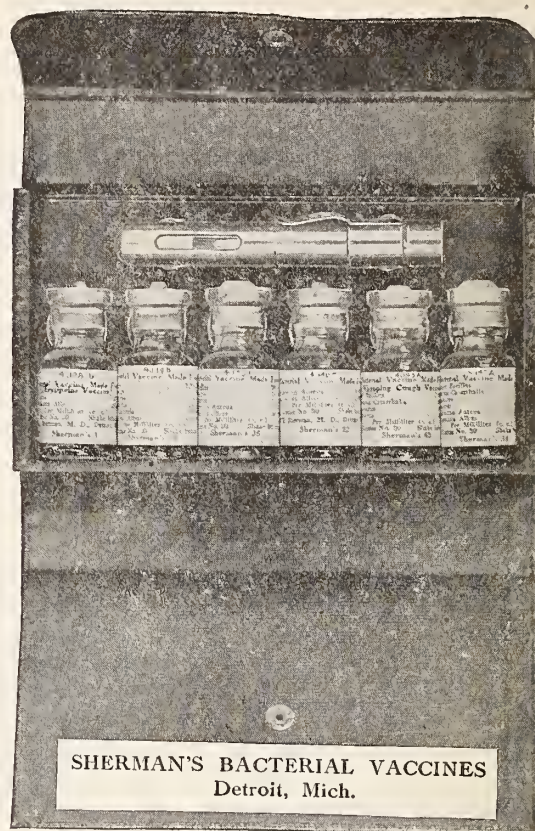
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STATEMENT OF CLAIM

copied from summons

Dentist Extracted Tooth Physician Administered Gas

"Plaintiff's claim is for injuries caused by defendant, by reason of his unskillful and unworkmanlike services in pulling out plaintiff's tooth and in giving and administering gas to plaintiff. Plaintiff further states that the defendant gave him an overdose of gas and caused gas poisoning; that as a result thereof he was incapacitated from transacting his business duties, and expended monies for doctor's bills, all of which expense and damage was due to the defendant's incompetence and unskillfulness."

—but the Christmas merriment went happily on; the Doctors had Medical Protective Contracts;

—and this is what they think of our service:

THE MEDICAL PROTECTIVE COMPANY,
Fort Wayne, Indiana.

Gentlemen:—Words are inadequate to express how ably your attorneys handled the case.

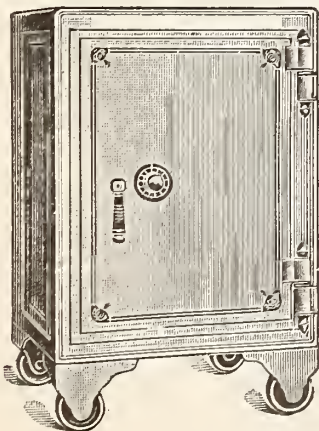
Your services have been entirely satisfactory. Wishing you further success, I am,

Very sincerely,

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Announcement of Merging of Victor Electric Corporation with X-Ray Interests of General Electric Company

An arrangement has been completed which took effect October 1, 1920, under which the entire business of the Victor Electric Corporation and X-Ray interests of the General Electric Company have been merged in a new corporation formed for the purpose and known as the VICTOR X-RAY CORPORATION. The new company has exchanged its capital stock for the X-Ray patents and good will of General Electric Company and for the assets and business of the old Victor Electric Corporation.

The formation of the new company will result in full manufacturing, engineering and research co-operation between Victor X-Ray Corporation and General Electric Company with respect to X-Ray problems. It will extend further the usefulness of the two companies and consequently, present needs for Coolidge tubes and other X-Ray devices will be adequately met.

The executive, administrative, engineering and sales staff of the old Victor Electric Corporation will remain practically unchanged. Mr. C. F. Samms becomes President and General Manager. Mr. J. B. Wantz retains full charge of manufacturing and designing. It is contemplated to bring about a complete co-ordination of the entire Victor Corporation organization with the research and engineering organization of General Electric Company with as little disturbance of the old relationships as possible.

Dr. W. D. Coolidge of the research laboratory of General Electric Company becomes Consulting Engineer of the Victor X-Ray Corporation. Mr. C. C. Darnell of the research laboratory of General Electric Company becomes the Commercial Engineer of the Victor X-Ray Corporation. Mr. W. S. Kendrick, who for many years had charge of the commercial sale of the Coolidge tube, will be General Sales Manager. Mr. L. B. Miller remains General Manager of Agency Sales.

The Victor X-Ray Corporation will continue to carry out the same liberal policies and practices toward the X-Ray trade that have already been established by the General Electric Company.

The primary purpose of this merger was to co-ordinate the efforts of the best and most constructive elements in the research, engineering and commercial divisions of the X-Ray field to the end that users of X-Ray equipment might be served in the best possible manner, and assurances are given by the officers of the new corporation that the ideal toward which they intend to strive is 100% service.

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C. F. Samms President

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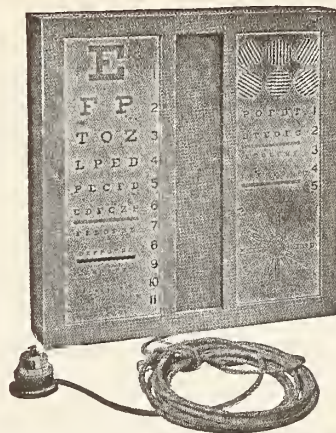
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The next session begins October 5, 1920.

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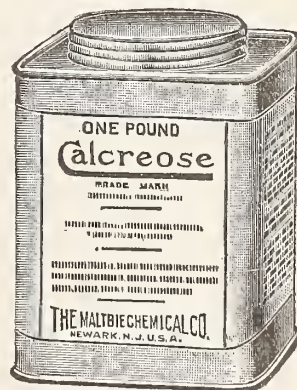
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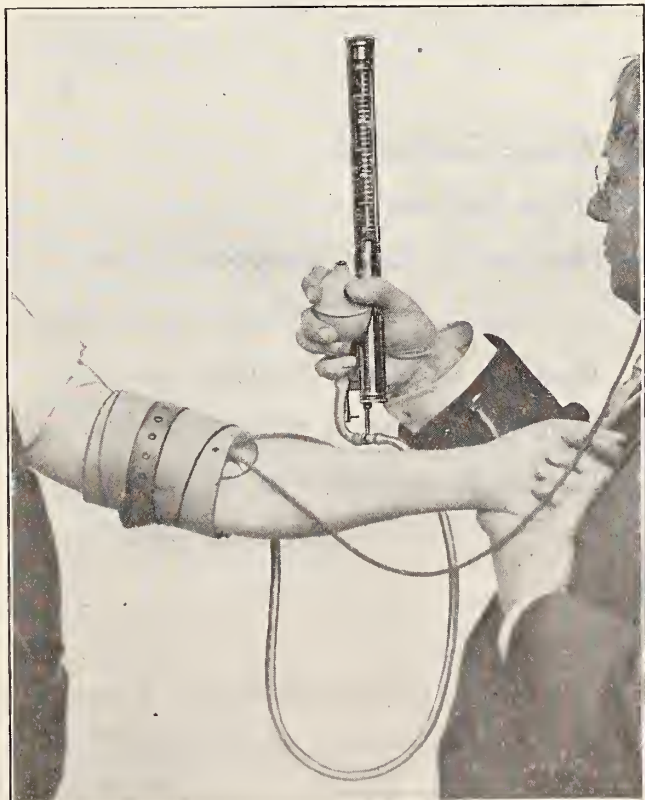
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I hereby subscribe for The Journal of The Michigan State Medical
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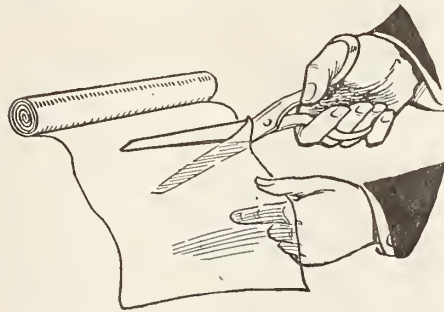
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